Report of the 10th Flow and Virtual Crossmatch Exchange
May 25, 2017

Cells	55-56
Serum	57-60

For the 10th Flow and Virtual Crossmatch Exchange, Serum (patient) MX-053 from Flow Crossmatch Exchange 9 (September, 2016) was re-examined as serum 57, and virtual donor V2 from Exchange 9 was examined as cell 55. A comparison of virtual crossmatch predictions (MX-053 vs. V2) against actual crossmatch outcome (**serum 57 vs. cell 55**) are summarized in part 1 of this report. Part 2 summarizes the flow cytometric crossmatch (FXM) results for 2 cells (**cell nos. 55 - 56**) against 4 sera (**serum nos. 57 - 60**), and examines the single antigen data for the 4 sera. Finally, in part 3, the virtual crossmatch predictions for 4 potential donors (V1 - V4) against serum 59 and serum 60 are examined.

Part 1

Actual Flow Cytometric Crossmatch vs. Virtual Crossmatch

A direct comparison of virtual crossmatch (VXM) predictions and actual FXM results for cell 55 (V2) against serum 57 (MX-053) are summarized in Tables 1a and 1b. Among the 15 labs reporting VXM results in Exchange 9, 14 reported back actual T-cell FXM results and 13 reported back actual B-cell FXM results in this present study. For the T-cell FXM, less agreement was observed among labs for the actual FXM than for T-cell predictions. In Exchange 9, 13 labs predicted the T-cell crossmatch to be positive, while 2 predicted borderline results in the presence of weak class I DSA (A1, Cw7). In Exchange 10, 8 reported the T-cell FXM as positive in agreement with predictions, while 4 reported it as negative, instead of positive as predicted. Of the 2 labs predicting the T-cell VXM to be borderline, 1 reported the actual FXM as positive and the other reported it as negative.

Table 1a. Summary of Actual Flow crossmatch results vs. Virtual Crossmatch predictions - Direct comparison

Exchange 010						Exchange 009				
Actual Flow Crossmatch - Serum 57 vs. Cell 55						Virtual Crossmatch - Patient MX-053 vs. Donor 2				
Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results		Donor	Serum no.	#Labs	T-cell Prediction	B-cell Prediction
55	57	15	POS(9) NEG(5) NT(1)	POS(6) NEG(7) NT(2)		V2	53	15	POS(13) Borderline(2)	POS(10) NEG(4) Borderline(1)

< 80% agreement

Table 1b. Direct comparison of Actual crossmatch results vs. Virtual crossmatch results

		T-cell Virtual XM		
		+	-	Ø
Actual Flow XM	+	8	0	1
	-	4	0	1
	Ø	1	0	0

		B-cell Virtual XM		
		+	-	Ø
Actual Flow XM	+	4	1	1
	-	5	2	0
	Ø	1	1	0

+ = postive
- = negative
Ø = uncertain/not typed

n = number of labs

For the B-cell FXM, labs were just as divided in the reporting of actual FXM results as they were in their predictions. In Exchange 10, only 4 of the 10 labs predicting the B-cell VXM to be positive, reported the actual FXM as positive, as no class II DSA were detected. Of the 4 predicting a negative crossmatch, 1 reported the actual FXM as positive, 2 reported it as negative, and 1 did not report results.

A side by side comparison of actual FXM crossmatch results with virtual predictions for individual labs is shown in Table 1c. Overall, labs were consistent in the reporting of DSA in Exchange 9 and 10. The presence of weak class I DSA (A1 and Cw7) was reported in each study, with labs reporting respective mean MFI = 3450 and 3004 against donor V2 in Exchange 9 and MFI = 2738 and 2689 against cell 55 in Exchange 10. For class II, 10 out of 15 labs reported no class II DSA were present against donor V2 in Exchange 9. Better agreement was achieved among labs in Exchange 10, as 13/14 labs noted no class II DSA were present against cell 55. Weak class I DSA (MFI < 3000) combined with the absence of class II DSA, may have contributed to the variability observed in virtual predictions and in actual FXM outcomes.

Table 1c. Individual Actual Flow crossmatch results vs. Virtual crossmatch results - Direct Comparison

Exchange 010					Exchange 009				
Actual Flow Crossmatch - Serum 57 vs. Cell 55					Virtual Crossmatch - Patient MX-053 vs. Donor 2				
Center	T-Cell RESULT	Class I DSA(MFI)	B-Cell RESULT	Class II DSA(MFI)	Center	Virtual T-cell Prediction	Class I DSA (MFI)	Virtual B-cell Prediction	Class II DSA (MFI)
23	Positive	A1(3372), Cw7(2782)	Negative	no DSA	23	Positive	A1(3334), Cw7(2242)	Positive	no DSA
206	Negative	A1(3307)	Negative	no DSA	206	Positive	A1(4670)	Positive	DR11(7373), DR52(4580)
774	Negative	A1(2380)	Negative	no DSA	774	Positive	A*01:01(3623)	Negative	no DSA
792	Positive	A1(2528), Cw7(2845)	Negative	DR53(471)	792	Weak Positive	A*01:01(2653)	Weak Positive	DRB4*01:01(512)
836	NT	A1(3204), Cw7(2079)	NT	no DSA	836	Positive		Positive	
1160	Positive	A1(2855), Cw7(1397)	Positive	no DSA	1160	Borderline Neg/Weak Pos	A1(1775)	Borderline Neg/Weak Pos	no DSA
2400	Positive	A1(2992), Cw7(3761)	Negative	no DSA	2400	Weak Positive	A*01:01(3680)	Negative	no DSA
3224	Positive	A1(3900)	Borderline Positive	no DSA	3224	Positive	A1(3661), Cw7(2783)	Positive	no DSA
3753	Negative	A1(2602), Cw7(2833)	Negative	no DSA	3753	Borderline	A1(4235), Cw7(3768)	Positive	no DSA
3966	Positive		Positive		3966	Positive	B27(9117), A11(3626)	Positive	DQ6(10877)
4661	Negative	A1(284), Cw7(3259)	Positive	no DSA	4661	Positive	A*11:01(686), B*27:05(1469)	Positive	DQB1*06:03(1686)
8001	Positive	A1(3126), Cw7(2483)	Positive	no DSA	8001	Positive	A*01:01(3709)	Positive	DRB4*01:01(525)
8050	Positive	A1(2993), Cw7(2883)	Negative	no DSA	8050	Positive	A1(4386), Cw7(3278)	Positive	no DSA
8083	Positive	A1(3406)	Positive	no DSA	8083	Positive	A*01:01(2900)	Negative	no DSA
8096	Negative	no DSA	NT	no DSA	8096	Positive	A1(4732)	Negative	no DSA

Part 2
Flow Cytometric Crossmatch

Flow cytometric crossmatch results for cell 55 and cell 56 against sera sample nos. 57 - 60 are summarized in Table 2. Individual results for each laboratory, along with reported class I and class II DSA for each sera, are listed in tables 4 - 11.

Cell 55. The genotype for this sample from a Caucasian donor is A*01:01-A*29:02-B*08:01-B*44:03-C*07:01-C*16:01/DRB1*07:01-DRB1*11:04-DRB3*02:02:01G-DRB4*01:01:01G-DQB1*02:02-DQB1*03:01 -DPB1*04:02-DPB1*17:01. The T-cell and B-cell crossmatch for cell 55 against serum nos. 58 - 60 were reported as positive in good agreement. Among the 3 crossmatch pairs, only 3 discrepancies were observed, as 1 lab reported the B-cell crossmatch against serum 59 as negative instead of positive, and 2 labs reported the T-cell crossmatch against serum 60 as negative instead of positive. By contrast, no agreement was achieved for the crossmatch with serum 57. Twelve labs reported the T-cell crossmatch as positive, with 1 lab noting the positivity as weak. The remaining 9 labs reported the crossmatch as negative. For the B-cell crossmatch, 8 labs reported it as positive, while 11 labs reported it as negative. One lab noted the crossmatch was borderline positive.

Cell 56. The phenotype for this sample from a Vietnamese donor is A*24:10-A*33:03-B*18:02-B*56:04-C*01:02:01G-C*07:04:01G/ DRB1*09:01:02G-DRB1*12:02-DRB3*03:01-DRB4*01:01:01G-DQB1*03:01, DQB1*03:03-DPB1*04:01:01G-DPB1*05:01:01G. Good agreement was achieved for cell 56 against serum 59 and serum 60, as labs reported the T–cell and B-cell crossmatch as positive, with only 1 or 2 discrepancies reported among them. For the crossmatch against serum 58, good agreement was achieved for the B-cell crossmatch, as all but 1 lab reported it as positive. Less agreement was achieved for the T-cell crossmatch, as 18 labs reported it as positive and 3 reported it as negative. Lastly, against serum 57, no agreement was achieved for either the T- or B-cell crossmatch. For the T-cell crossmatch, 16 labs reported it as positive and 5 reported it as negative. For the B-cell crossmatch, 13 labs reported it as positive, while 6 reported it as negative.

Table 2. Summary of Flow crossmtch results for Cell #55-#056 vs. Serum #57-#60

Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results		Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results
55	57	23	POS(12) NEG(9) NT(2)	POS(8) NEG(11) NT(4)		56	57	23	POS(16) NEG(5) NT(2)	POS(13) NEG(6) NT(4)
55	58	23	POS(21) NT(2)	POS(19) NT(4)		56	58	23	POS(18) NEG(3) NT(2)	POS(18) NEG(1) NT(4)
55	59	23	POS(21) NT(2)	POS(18) NEG(1) NT(4)		56	59	23	POS(19) NEG(2) NT(2)	POS(17) NEG(2) NT(4)
55	60	23	POS(19) NEG(2) NT(2)	POS(19) NT(4)		56	60	23	POS(19) NEG(2) NT(2)	POS(18) NEG(1) NT(4)

< 80% consensus

Antibody Identification

Class I and class II Luminex single antigen results for serum samples 57 - 60 are summarized in Tables 12 - 15 and individual results for each participating laboratory are listed in Tables 16 –23.

Serum 57 was previously examined as serum 53 (Exchange 9). In this present study, weak anti-A1 (2738) reactivity was reported against cell 55. Additional reactivity to Cw7 (2689) was also reported against cell 55, as well as against cell 56. In addition, anti-B56 (4523) and anti-A24 (1877) reactivity was reported against cell 56. For class II, only DSA against cell 56 were detected, as labs reported anti-DQ9 and DP4(DP401) reactivity, with respective mean MFI = 5144 and 1390.

For serum 58, strong class I DSA were reported against cell 55 and cell 56. Against cell 55, anti-B44 (17975) reactivity was reported. Against cell 56, labs reported anti-B18 (13428) reactivity. For class II, strong anti-DR53 reactivity was reported against each cell, with MF=20933. Additional reactivity to DR7 (3042) and DR11 (1408) was also reported against cell 55, and 2 labs reported anti-DR9 (3277) reactivity against cell 56.

Serum 59 was reported as positive for class I DSA against cell 55 and cell 56. Moderate to strong reactivity to B8 (7768) and B44 (12989) was reported against cell 55 by all labs. Against cell 56, reactivity to B56 and B18 was detected, with respective mean MFI = 7450 and 7160. This sample was reported a negative for class II.

For **Serum 60**, class I DSA of moderate strength were reported against each cell, with labs reporting anti-B44 (3613) reactivity against cell 55 and labs reporting anti-B18 (5282) and anti-B56 (3384) reactivity against cell 56. By contrast, much stronger class II DSA were detected against cell 55 and cell 56, with labs reporting anti-DR52 and anti-DPw4(DP402) reactivity, with respective mean MFI = 14344 and 18709. Additional reactivity to DR11 (17880), DP17 (14881), DQ2 (5845), and DR7 (2563) was also reported against cell 55.

Flow crossmatch and Antibody identification - Conclusion:

For the **T-cell flow crossmatch**, good agreement (>80%) was achieved for 5 out of 8 crossmatch pairs. In each case, strong class I DSA (MFI > 13000) or multiple DSA of moderate strength (MFI = 3000 - 8000) were reported. For the remaining 3 crossmatch pairs, no agreement was achieved. For serum 58 against cell 56, several discrepancies were observed, as 3 labs reported the crossmatch as negative instead of positive. For serum 57, no agreement was achieved for the T-cell crossmatch against either cell 55 or cell 56. For serum 57 against cell 55, 12 labs reported the crossmatch as positive and 9 reported it as negative, in the presence of weak anti-A1 (2738) and –Cw7 (2689) reactivity. For serum 57 against cell 56, 16 labs reported the T-cell crossmatch as positive and 5 reported it as negative, as class I DSA (B56 and Cw7), with respective MFI = 4523 and 2689, were detected. This suggests when class I DSA strength is weak (MFI < 5000), greater variability is observed in the sensitivity of the T-cell crossmatch among labs.

For the **B-cell flow crossmatch**, good agreement was achieved for 6 out of 8 crossmatch pairs. In each case, strong class II DSA (MFI > 14000) and/or class I DSA (MFI >8000) were present. Of the 6 crossmatch pairs with good agreement, 2 were reported with no discrepancies. The remaining 4 had only 1 or 2 discrepancies among them, with 3 labs accounting for the discrepancies observed. No agreement was achieved for the B-cell crossmatch for serum 57 against cell 55 and cell 56. For serum 57 vs. cell 55, 8 labs reported the crossmatch as positive, while 11 reported it as negative, in the presence of weak class I DSA (MFI < 5000). For serum 57 vs. cell 56, 13 labs reported the crossmatch as positive and 6 reported it as negative, in the presence of class I (B56 and Cw7) and class II (DQ9 and DPw4) DSA of weak to moderate strength (MFI <5200). This shows, when class I/II DSA strength is weak or when DSA at the DP and DQ loci are of moderate strength, variability is observed in the sensitivity of the B-cell crossmatch.

Virtual Crossmatch Paper Challenge

Virtual crossmatch predictions for donor V1 - V4 against sera (patient) samples 59 and 60 are summarized in Table 3 and individual laboratory predictions are listed in Tables 24 - 31. Fictional donor histories precede each patient-donor summary.

For the virtual **T-cell crossmatch**, good agreement (>80%) was achieved for all 8 virtual patient-donor pairs, which are predicted to be positive. Two virtual pairs (serum 60 vs. donor V2 and serum 60 vs. V4) were reported with no discrepancies in the presence of strong class I DSA (MFI > 10000). Four virtual pairs were reported with 1 or 2 discrepancies. In each case, labs predicting the crossmatch as negative either detected the presence of a single class I DSA (MFI ~ 7000) or detected no DSA at all. For the remaining 2 virtual pairs (serum 60 vs. V3 and serum 59 vs. V4), several discrepancies were observed for each. In the case of serum 60 against donor V3, 2 labs predicting the crossmatch to be negative, reported only anti-B51 (MFI=4345) reactivity against V3 and the 3rd lab did not detect any DSA against the donor. For serum 59 against donor V4, reactivity to B35 (7300) and Bw6 (11236) was reported by labs. A number of labs (n=5) noted the donor's B*35:05 allele is not present on the SAB panel (only B*35:01). As such, 1 lab reported the virtual prediction as undetermined and another reported it as positive-undetermined. Two labs predicted the crossmatch to be negative, with one noting the class I DSA in serum 59 was C1q negative.

For the virtual **B-cell crossmatch**, only half (4 out of 8) of the virtual donor-patient pairs were reported with good agreement. Among the 4, 1 pair (serum 60 vs. V3) was reported with a single discrepancy. The other 3 pairs (serum 60 against donors V1, V2, and V4) were reported in complete agreement, as strong class II DSA (mean MFI > 14000) were detected. For the remaining 4 virtual patient-donor pairs (serum 59 vs. V1 - V4), predictions were almost split down the middle; agreement among labs was ≤ 55% for each virtual pair. No class II DNA were detected against any of the virtual donors, as serum 59 was reported as negative for class II antibodies. Only class I DSA of moderate strength (MFI = 7100 - 8100) was reported.

Table 3. Summary of Virtual Crossmatch Exchange #010 results (Serum #059-#60 versus Donor #001 - #004)

Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Predicted Risk Assessment	Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Predicted Risk Assessment
V1	59	20	**POS(18)** *NEG(2)*	POS(11) NEG(9)	Unacceptable(16) Acceptable(4)	V2	59	20	**POS(19)** *NEG(1)*	POS(11) NEG(9)	Unacceptable(18) Acceptable(2)
V1	60	20	**POS(19)** *NEG(1)*	**POS(20)**	Unacceptable(20)	V2	60	20	**POS(20)**	**POS(20)**	Unacceptable(20)

Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Predicted Risk Assessment	Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Predicted Risk Assessment
V3	59	20	**POS(18)** *NEG(2)*	POS(10) NEG(10)	Unacceptable(17) Acceptable(3)	V4	59	20	**POS(16)** *NEG(2)* Undetermined(1) Borderline(1)	POS(9) NEG(11)	Unacceptable(14) Acceptable(6)
V3	60	20	**POS(17)** *NEG(3)*	**POS(19)** *NEG(1)*	Unacceptable(19) Acceptable(1)	V4	60	20	**POS(20)**	**POS(20)**	Unacceptable(20)

<80% agreement

Overall good agreement was observed among labs with respect to positive virtual predictions in the presence of strong DSA (MFI > 10000) or when multiple DSA of moderate strength were present. By contrast, less agreement was observed when DSA strength was weak (< 5000). In the case of the virtual B-cell crossmatch, even greater variability was observed when class II DSA was absent and the class I DSA present was only moderate in strength (MFI < 7000).

Renal transplant risk assessment was reported with good agreement as unacceptable for 6 of the 8 virtual patient-donor pairs. In each case, class I DSA (MFI > 7000) and/or strong class II DSA (MFI > 15000) were present. For the remaining 2 virtual pairs, agreement was < 80%, with the majority of labs accessing the risk as unacceptable. In the case of the labs reporting the risk as acceptable, 1 lab reported the risk as acceptable with augmented immunosuppression, another reported it as acceptable noting the class I DSA is C1q negative, and others reported there were no DSA present or the DSA was weak.

Eleven labs reported cPRA (Calculated Panel Reactive Antibodies) values. Overall, median cPRA values for serum 59 (95%) were slightly lower than for serum 60 (99%), as serum 59 was reported as negative for class II antibodies. For each serum sample, labs in general reported cPRA values of > 90%. Two labs, however, reported much lower values than the rest, as only the unacceptable antigens detected against a specific virtual donor were used to determine cPRA rather than the total number of unacceptable antigens detected for the patient/sera.

Patient 1 (Serum 59):
History:
Individual is a 57-year-old male being evaluated for his second transplant. The patient's HLA type is A2-A11-B13-B46-Cw1-Cw10-DR15-DR51-DQ6-DP2.
The HLA typing of his first transplant was A2-A11-B13-B61-Cw1-Cw10/DR15-DR51-DQ6. DP typing of previous donor is unknown.

Patient 1 was reported as negative for class II antibodies.

Class I DSA (B18) were detected against **donor V1**, with mean MFI = 7160. Reactivity to Bw6 (11236) was also reported by some labs. For the virtual crossmatch, good agreement was achieved for patient 1 against donor V1, as 18/20 labs predict the T-cell crossmatch to be positive. Among the 2 labs predicting a negative crossmatch, 1 lab did not detect any class I DSA against the donor and the other noted the DSA was C1q negative. For the virtual B-cell crossmatch, no agreement was reached, as 11 labs predict the crossmatch to be positive and 9 predict it to be negative. Predicted renal transplant risk assessments were also mixed among labs, as 16 labs noted the risk as unacceptable and 4 noted it as acceptable.

Against **donor V2**, reactivity to B50 (8061) was reported by all labs. In addition, anti-Bw6 reactivity was also reported by a few labs. Virtual T-cell predictions were reported in good agreement, with 19 labs predicting it to be positive. One lab predicts a negative crossmatch. B-cell predictions were less conclusive, as 11 labs predict the crossmatch to be positive and 9 predict it to be negative. For transplant risk assessment, 18 labs reported the risk as unacceptable and 2 labs reported it is acceptable.

Anti-B61 (7072) reactivity was reported against **donor V3**. Two labs noted B61 was a repeat mismatch. A few labs also reported anti-A24 (1982) and –Bw6 (11236) reactivity. Good agreement was achieved for virtual T-cell crossmatch predictions as 18/20 labs predict it to be positive. For B-cell predictions, labs were split down the middle, 10 labs predicting it to be positive and 10 labs predicting it to be negative. Better agreement was achieved for the transplant risk assessment, as 17 labs noted the risk as unacceptable compared to 3 noting it as acceptable.

Against **donor V4**, class I DSA (B35) were detected, with mean MFI = 7300. Additional reactivity to Bw6 and Cw1 (1661) was also reported by a few labs. For the T-cell crossmatch, 16 labs predict it to be positive, 2 predict it to be negative, 1 predicts borderline results, and 1 noted it as undetermined. For the B-cell crossmatch, 9 labs predict the crossmatch to be positive and 11 labs predict it to be negative. Renal transplant risk assessments were just as variable among labs, as 14 labs access the risk as unacceptable, 5 access it as acceptable, and 1 noted it as acceptable with augmented immunosuppression. A number (n=5) of labs observed donor V4 carries an allele (B*35:05) not present on the SAB panel, which may have influenced virtual predictions.

Patient 2 (Serum 60): *History:*
Individual is a 36-year old female being evaluated for her first transplant. The patient's HLA type is A1-A3-B7-B27-Cw2-Cw7-DR15-DR51-DQ6-DP1.
Patient has had 1 prior pregnancy. The HLA type of the child is A1-A2-B51-B27-Cw2-Cw8-DR8-DR15-DR51-DQ4-DQ6-DP1-DP6.

For patient 2, multiple class I and class II DSA were reported against **donor V1**. Anti-B18, -B27, -Bw4, -DR18, -DR52, -DR13, and -DPw3 reactivity was reported, with respective MFI = 5282, 3734, 9574, 15437, 14344, 8670, and 16733. Virtual T-cell and B-cell predictions were in turn reported with good agreement, with 19/20 labs predicting a positive T-cell crossmatch and 20/20 labs predicting a positive B-cell crossmatch. The predicted renal transplant risk assessment was reported as unacceptable in complete agreement .

Against **donor V2**, strong class I and class II DSA were also detected. Reactivity to B58 (10375), B50 (3303), DR11(17880), DR52(14344), DPw2 (17411), and DP18 (19609) was detected by all labs. As a result, virtual T-cell and B-cell crossmatch predictions were reported as positive by all 20 labs. In turn, the renal transplant risk assessment for this patient-donor pair was reported in complete agreement as unacceptable.

Anti-B51 (4345) and –DPw2 (17411) reactivity was reported against **donor V3**. Two labs noted B51 as a repeat mismatch from a prior pregnancy. Additional reactivity to A24 (1471) and Bw4 (9574) was also reported by a few labs. Virtual T-cell predictions were reported as positive by 17 labs. Three labs reported it as negative. For the virtual B-cell crossmatch, good agreement was achieved, as 19/20 labs predict it to be positive. Transplant risk assessments reflected B-cell predictions, with 19 labs assessing the risk as unacceptable and 1 lab accessing it as acceptable.

Against **donor V4**, strong class I and class II DSA were detected, with labs reporting anti-A2 (15429), -B35 (3435), -B46(2884), and anti-DPw3 (16733) reactivity. Consequently, predictions for the virtual T-cell and B-cell crossmatch were reported in complete agreement as positive. All 20 labs accessed the renal transplant risk as unacceptable for this patient-donor pair.

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Arlene Locke, David Gjertson, Qiuheng Zhang, and Elaine F. Reed

Flow Cytometric Crossmach - Individual results

Table 4. Individual Flow crossmatch results and DSA reported for Cell #055 vs. Serum #057

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
23	57	10	85			POS	A1(3372), Cw7(2782)	40	26			NEG	no DSA	450	661	NO
54	57					NEG	A1(3485)					NEG	no DSA			NO
206	57	2.98	8.16	2.14		NEG	A1(3307)	4.94	22.3	2.84		NEG	no DSA	7.14	12.15	YES
230	57	1	0.4			NEG	A1(2728)	2	-5			NEG	no DSA	1	10	NO
615	57	40	59			POS		40	170			POS		140 (No pronase)	290	YES
774	57	50	47			NEG	A1(2380)	120	102			NEG	no DSA	237	308	NO
792	57	52	92			POS	A1(2528), Cw7(2845)	106	98			NEG	DR53(471)	208	265	YES
836	57					NT	A1(3204), Cw7(2079)					NT	no DSA			NO
1160	57	90	133			POS	A1(2855)	120	161			POS	no DSA	212	276	YES
2400	57	40	68			POS	A1(2992), Cw7(3761)	80	0			NEG	no DSA	133	407	NO
3135	57	1,2	453	1,2		NEG						NT		375		NO
3224	57	70	36			POS	A1(3900)	140	-11			Borderline POS	no DSA	255	239	YES
3625	57	40MCS	44			POS	no DSA	40MCS	16			NEG	no DSA	147	118	NO
3753	57	50	35			NEG	A1(2602), Cw7(2833)	100	32			NEG	no DSA	223	289	NO
3966	57	20	66			POS		50	99			POS		132	266	NO
4345	57					NEG						NEG				NO
4661	57	10	6			NEG	A1(284), Cw7(3259)	10	41			POS	no DSA	224	325	YES
5219	57	1		2.75		Weak POS		1.2		10.2		POS		0.302	0.397	NO
8001	57	50	73			POS	A1(3126), Cw7(2483)	100	122			POS	no DSA	292	304	YES
8050	57	50	66		1215	POS	A1(2993), Cw7(2883)	120	49		5423	NEG	no DSA	103	258	NO
8083	57	90	298			POS	A1(3406)	150	279			POS	no DSA	280	292	YES
8096	57	50	13.63			NEG	no DSA	NT				NT	no DSA	<25	NT	NO
8103	57					NT	A1(659), Cw7(2269)					NT	no DSA			NO

Table 5. Individual Flow crossmatch results and DSA reported for Cell #055 vs. Serum #058

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
23	58	10	434			POS	B44(15880)	40	344			POS	DR53(13402), DR7(2291)	450	661	NO
54	58					POS	B44(22879)					POS	DR53(22869), DR7(3674)			NO
206	58	2.98	199.36	28.92		POS	B44(18223)	4.94	748.35	62.59		POS	DR53(19873)	7.14	12.15	YES
230	58	1	12			POS	B44(17505)	2	15			POS	DR53(17322), DR7(3600)	1	10	NO
615	58	40	467			POS		40	418			POS		140 (No pronase)	290	YES
774	58	50	340			POS	B44(20868)	120	391			POS	DR53(21158), DR7(2897)	237	308	NO
792	58	52	404			POS	B44(19335)	106	443			POS	DR53(19428), DR7(3600), DR11(875)	208	265	YES
836	58					NT	B44(20806)					NT	DR53(20638), DR7(3759), DR11(1138)			NO
1160	58	90	455			POS	B44(22123)	120	452			POS	DR53(20915), DR7(4589)	212	276	YES
2400	58	40	351			POS	B44(21040)	80	235			POS	DR53(22722), DR7(4301)	133	407	NO
3135	58	1,2	1530	4,1		POS						NT		375		NO
3224	58	70	359			POS	B44(21263)	140	451			POS	DR53(20427), DR7(3442), DR11(1359)	255	239	YES
3625	58	40MCS	500			POS	B44(15684)	40MCS	332			POS	DR53(19491), DR7(3363), DR11(1531)	147	118	NO
3753	58	50	266			POS	B44(20218)	100	326			POS	DR53(22531), DR7(2692)	223	289	NO
3966	58	20	385			POS		50	405			POS		132	266	NO
4345	58					POS						POS				NO
4661	58	10	305			POS	B44(8770)	10	350			POS	DR53(16546), DR7(1242), DR11(1421)	224	325	YES
5219	58	1		79.8		POS		1.2		443.3		POS		0.302	0.397	NO

Table 5. Individual Flow crossmatch results and DSA reported for Cell #055 vs. Serum #058 - cont.

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
8001	58	50	395			POS	B44(23352)	100	417			POS	DR53(22152), DR7(2934)	292	304	YES
8050	58	50	365		31061	POS	B44(20133)	120	295		78049	POS	DR53(22122), DR7(2030), DR11(1735)	103	258	NO
8083	58	90	353			POS	B44(15945)	150	452			POS	DR53(18690)	280	292	YES
8096	58	50	138.33			POS	B44(7932)	NT				NT	DR53(10386)	<25	Not Tested	NO
8103	58					NT	B44(11599)					NT	DR53(12089), DR7(1229), DR11(1802)			NO

Table 6. Individual Flow crossmatch results and DSA reported for Cell #055 vs. Serum #059

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
23	59	10	359			POS	B44(11075), B8(9809)	40	252			POS	no DSA	450	661	NO
54	59					POS	B44(17693), B8(10459)					POS	no DSA			NO
206	59	2.98	144.86	21.29		POS	B44(15393), B8(9648)	4.94	351.35	29.92		POS	no DSA	7.14	12.15	YES
230	59	1	7			POS	B44(14096), B8(8540)	2	17			POS	no DSA	1	10	NO
615	59	40	407			POS		40	382			POS		140 (No pronase)	290	YES
774	59	50	264			POS	B44(13708), B8(7843)	120	306			POS	no DSA	237	308	NO
792	59	52	290			POS	B44(14599), B8(8739)	106	308			POS	no DSA	208	265	YES
836	59					NT	B44(15811), B8(8566)					NT	no DSA			NO
1160	59	90	422			POS	B44(13283), B8(7309)	120	437			POS	no DSA	212	276	YES
2400	59	40	311			POS	B44(14416), B8(8627)	80	162			POS	no DSA	133	407	NO
3135	59	1,2	1030	2,7		POS						NT		375		NO
3224	59	70	360			POS	B44(18070), B8(11692)	140	352			POS	no DSA	255	239	YES
3625	59	40MCS	308			POS	B44(10136), B8(4633)	40MCS	259			POS	no DSA	147	118	NO
3753	59	50	234			POS	B44(14518), B8(6740)	100	263			POS	no DSA	223	289	NO
3966	59	20	282			POS		50	287			POS		132	266	NO
4345	59					POS						NEG				NO
4661	59	10	258			POS	B44(4190), B8(1824)	10	298			POS	no DSA	224	325	YES
5219	59	1		60.2		POS		1.2		223.4		POS		0.302	0.397	NO
8001	59	50	356			POS	B44(17398), B8(9890)	100	387			POS	no DSA	292	304	YES
8050	59	50	307		16564	POS	B44(14566), B8(9493)	120	232		39426	POS	no DSA	103	258	NO
8083	59	90	368			POS	B44(14183), B8(7995)	150	446			POS	no DSA	280	292	YES
8096	59	50	81.07			POS	B44(6387), B8(6230)	NT				NT	no DSA	<25	Not Tested	NO
8103	59					NT	B44(4286), B8(1800)					NT	no DSA			NO

Table 7. Individual Flow crossmatch results and DSA reported for Cell #055 vs. Serum #060

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
23	60	10	184			POS	B44(6066)	40	357			POS	DQ2(3638), DR11(15678), DR52(12180), DP17(13459), DR7(2973), DP402(16921)	450	661	NO
54	60					NEG	B44(4806)					POS	DQ2(4702), DR11(20920), DR52(18413), DP17(18148), DR7(3113), DP4(23089)			NO
206	60	2.98	18.81	3.63		POS	B44(3898)	4.94	1067.85	88.89		POS	DQ2(5237), DR11(17834), DR52(16163), DP17(15663)	7.14	12.15	YES
230	60	1	1.5			POS		2	29			POS	DQ2(2845), DR11(16927), DR52(13492), DP17(13821), DR7(2456), DP402(18223)	1	10	NO
615	60	40	240			POS		40	367			POS		140 (No pronase)	290	YES
774	60	50	126			POS	B44(3340)	120	342			POS	DQ2(6664), DR11(18592), DR52(14520), DP17(15156), DR7(2483), DP402(21220)	237	308	NO
792	60	52	142			POS	B44(3618)	106	470			POS	DQ2(7345), DR11(17203), DR52(15219), DP17(15016), DR7(2828), DP4(19351), DQ7(804)	208	265	YES
836	60					NT	B44(3647)					NT	DQ2(8634), DR11(18620), DR52(17507), DP17(15229), DR7(3118), DP402(20404)			NO

Table 7. Individual Flow crossmatch results and DSA reported for Cell #055 vs. Serum #060 - cont.

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
1160	60	90	256			POS	B44(4388)	120	528			POS	DQ2(2383), DR11(19359), DR52(14530), DP17(16510), DR7(2566), DP4(21264)	212	276	YES
2400	60	40	199			POS	B44(2985)	80	213			POS	DQ2(4443), DR11(20064), DR52(16271), DP17(16370), DR7(3548), DP4(21578)	133	407	NO
3135	60	1,2	729	1,9		POS						NT		375		NO
3224	60	70	155			POS	B44(4801)	140	408			POS	DQ2(8786), DR11(19321), DR52(18612), DP17(16979), DR7(3835), DP402(21645)	255	239	YES
3625	60	40MCS	99			POS	B44(3138)	40MCS	308			POS	DQ2(5713), DR11(14205), DR52(9043), DP17(11059), DR7(1533), DP402(13626)	147	118	NO
3753	60	50	132			POS	B44(2242)	100	424			POS	DQ2(4129), DR11(19836), DR52(16250), DP17(16621), DR7(2592), DP402(2297)	223	289	NO
3966	60	20	165			POS		50	268			POS		132	266	NO
4345	60					POS						POS				NO
4661	60	10	87			POS	B44(1726)	10	252			POS	DQ2(1240), DR11(14365), DR52(8758), DP17(11222), DR7(1019), DP402(15011)	224	325	YES
5219	60	1		14.4		POS		1.2		204		POS		0.302	0.397	NO

Table 7. Individual Flow crossmatch results and DSA reported for Cell #055 vs. Serum #060 - cont.

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
8001	60	50	131			POS	B44(4490)	100	444			POS	DQ2(7540), DR11(19734), DR52(18172), DP17(17030), DR7(2761), DP4(21980)	292	304	YES
8050	60	50	126		2328	POS	B44(3624)	120	294		77208	POS	DQ2(3961), DR11(20456), DR52(15590), DP17(17940, DR7(3130), DP402(22681)	103	258	NO
8083	60	90	357			POS	no DSA	150	566			POS	DQ2(8602), DR11(17329), DR52(15025), DP17(14971), DP4(18749)	280	292	YES
8096	60	50	35.13			NEG	no DSA	NT				NT	DQ2(14343), DR11(19701), DR52(13486)	<25	Not Tested	NO
8103	60					NT	B44(1607)					NT	DQ2(604), DR11(11298), DR52(4498), DP17(7793), DR7(501), DP402(11207)			NO

Table 8. Individual Flow crossmatch results and DSA reported for Cell #056 vs. Serum #057

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
23	57	10	100			POS	B56(5723), A24(2842), Cw7(2782)	40	87			POS	DQ9(3600)	498	742	NO
54	57					NEG	B56(5729), A24(2466)					POS	DQ9(7700), DP4(1958)			YES
206	57	2.98	11.12	2.39		POS	B56(5945)	4.94	115.5	9.25		POS	DQ9(5564)	7.99	14	YES
230	57	1	0.4			NEG	B56(4659), A24(2000)	2	-2			NEG		1.2	10.6	NO
615	57	40	44			POS		40	142			POS		245	371	YES
774	57	50	69			POS	B56(4251)	120	142			POS	DQ9(5701)	257	399	NO
792	57	52	92			POS	B56(4710), A24(1874), Cw7(2845)	106	142			POS	DQ9(5713), DP4(1646), DR53(471)	232	382	YES
836	57					NT	B56(5942), A24(2231), Cw7(2079)					NT	DQ9(6008), DP401(1970)			NO
1160	57	90	117			POS	B56(4964), A24(2231), Cw7(1397)	120	282			POS	DQ9(6287)	250	329	YES
2400	57	40	105			POS	B56(5147), A24(2241), Cw7(3761)	80	50			NEG	DQ9(4016)	103	426	YES
3135	57	1,2	878	1,4		POS						NT		611		NO
3224	57	70	35			POS	B56(6547), A24(2616)	140	132			POS	DQ9(7949), DP401(1928)	255	239	YES
3625	57	40MCS	76			POS	B56(2619), Cw7(2990)	40MCS	72			POS	DQ9(3691), DP4(1260)	161	115	NO
3753	57	50	45			NEG	B56(4666), Cw7(2833))	100	61			NEG	DQ9(3415)	241	410	NO
3966	57	20	84			POS		50	131			POS		143	291	NO
4345	57					POS						NEG				NO
4661	57	10	32			POS	B56(679), A24(238), Cw7(3259)	10	98			POS	DQ9(1241), DP4(861)	210	332	YES
5219	57	1		3.73		WEAK POS		1.2		33.9		POS		0.305	0.407	NO
8001	57	50	74			POS	B56(5592), A24(2165), Cw7(2483)	100	247			POS	DQ9(6380), DP4(1512)	258	308	YES

Table 8. Individual Flow crossmatch results and DSA reported for Cell #056 vs. Serum #057 - cont.

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
8050	57	50	71		1719	POS	B56(5331), A24(1034), Cw7(2883)	120	111		25555	NEG	DQ9(4459)	130	339	NO
8083	57	90	53			NEG	B56(5740)	150	19			NEG	DQ9(5459)	281	449	YES
8096	57	>=50	17.7			NEG	B56(2508), Cw1(2870)	NT				NT	no DSA	25	Not Tested	NO
8103	57	NT				NT	B56(670), A24(596), Cw7(2269)	NT				NT	DP401(523)			NO

Table 9. Individual Flow crossmatch results and DSA reported for Cell #056 vs. Serum #058

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
23	58	10	149			POS	B18(14435)	40	197			POS	DR53(13402)	498	742	NO
54	58					NEG	B18(17798)					NEG	DR53(22869)			YES
206	58	2.98	9.57	2.2		POS	B18(14988)	4.94	391.5	28.96		POS	DR53(19873)	7.99	14	YES
230	58	1	0.7			NEG	B18(13326)	2	3.2			POS	DR53(17322)	1.2	10.6	NO
615	58	40	105			POS		40	231			POS		245	371	YES
774	58	50	77			POS	B18(14988)	120	241			POS	DR53(21158)	257	399	NO
792	58	52	187			POS	B18(14618)	106	277			POS	DR53(19428), DR9(539), DQ7(361)	232	382	YES
836	58					NT	B18(15326)					NT	DR53(20638)			NO
1160	58	90	170			POS	B18(18746)	120	406			POS	DR53(20915)	250	329	YES
2400	58	40	141			POS	B18(17457)	80	144			POS	DR53(22722)	103	426	YES
3135	58	1,2	830	1,4		POS						NT		611		NO
3224	58	70	56			POS	B18(15796)	140	259			POS	DR53(20427)	255	239	YES
3625	58	40MCS	70			POS	B18(9124)	40MCS	198			POS	DR53(19491)	161	115	NO
3753	58	50	65			POS	B18(15649)	100	179			POS	DR53(22531)	241	410	NO
3966	58	20	190			POS		50	294			POS		143	291	NO
4345	58					POS						POS				NO
4661	58	10	25			POS	B18(1457)	10	211			POS	DR53(16546)	210	332	YES
5219	58	1		9.8		POS		1.2		163.3		POS		0.305	0.407	NO
8001	58	50	92			POS	B18(17553)	100	372			POS	DR53(22152)	258	308	YES
8050	58	50	72		1738	POS	B18(16180)	120	195		63522	POS	DR53(22122)	130	339	NO
8083	58	90	150			POS	B18(12816)	150	247			POS	DR53(18690)	281	449	YES
8096	58	>=50	26.83			NEG	B18(5246)	Not Tested				NT	DR53(10386), DR9(6015)	25	NT	NO
8103	58	NT				NT	B18(6202)	NT				NT	DR53(12089)			NO

Table 10. Individual Flow crossmatch results and DSA reported for Cell #056 vs. Serum #059

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
23	59	10	207			POS	B56(9294), B18(9245)	40	121			POS	no DSA	498	742	NO
54	59					POS	B56(10351), B18(9440)					POS	no DSA			YES
206	59	2.98	61.82	8.74		POS	B18(9292), B56(8815)	4.94	326	24.29		POS	no DSA	7.99	14	YES
230	59	1	2.5			POS	B56(7722), B18(7499)	2	2.7			POS	no DSA	1.2	10.6	NO
615	59	40	210			POS		40	207			POS		245	371	YES
774	59	50	151			POS	B56(7485), B18(7399)	120	201			POS	no DSA	257	399	NO
792	59	52	170			POS	B56(8212), B18(7335)	106	152			POS	no DSA	232	382	YES
836	59					NT	B56(8598), B18(7992)					NT	no DSA			NO
1160	59	90	257			POS	B56(7579), B18(7175)	120	368			POS	no DSA	250	329	YES
2400	59	40	245			POS	B56(8222), B18(7295)	80	88			POS	no DSA	103	426	YES
3135	59	1,2	1095	1,8		POS						NT		611		NO
3224	59	70	207			POS	B56(11770), B18(10742)	140	253			POS	no DSA	255	239	YES
3625	59	40MCS	220			POS	B56(4587), B18(3881)	40MCS	174			POS	no DSA	161	115	NO
3753	59	50	151			POS	B56(6636), B18(6557)	100	179			POS	no DSA	241	410	NO
3966	59	20	198			POS		50	219			POS		143	291	NO
4345	59					POS						NEG				NO
4661	59	10	155			POS	B56(1604), B18(1142)	10	222			POS	no DSA	210	332	YES
5219	59	1		17.1		POS		1.2		93.6		POS		0.305	0.407	NO
8001	59	50	198			POS	B56(10173), B18(9725)	100	318			POS	no DSA	258	308	YES
8050	59	50	181		5664	POS	B56(9164), B18(8550)	120	173		50044	POS	no DSA	130	339	NO
8083	59	90	81			NEG	B56(8206), B18(7409)	150	117			NEG	no DSA	281	449	YES
8096	59	>=50	38.8			NEG	B56(3511)	Not Tested				NT	no DSA	25	NT	NO
8103	59	NT				NT	B56(1711), B18(1524)	NT				NT	no DSA			NO

Table 11. Individual Flow crossmatch results and DSA reported for Cell #056 vs. Serum #060

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
23	60	10	160			POS	B18(8291), B56(6155), A24(1658)	40	171			POS	DR52(12180), DP402(16921)	498	742	NO
54	60					NEG	B18(6992), B56(4261), A24(1701)					POS	DR52(18413), DP4(23089)			YES
206	60	2.98	33.62	5.21		POS	B18(5843), B56(3277)	4.94	364.5	27.04		POS	DR52(16163)	7.99	14	YES
230	60	1	1.8			POS	B18(5648), B56(3533)	2	4.5			POS	DR52(13492), DP402(18223)	1.2	10.6	NO
615	60	40	188			POS		40	243			POS		245	371	YES
774	60	50	129			POS	B18(5011), B56(3137)	120	219			POS	DR52(14520), DP402(21220)	257	399	NO
792	60	52	150			POS	B18(5087), B56(3185), A24(1406)	106	222			POS	DR52(15219), DP4(19351), DQ7(804)	232	382	YES
836	60					NT	B18(5369), B56(3094), A24(1763)					NT	DR52(17507), DP402(20404)			NO
1160	60	90	216			POS	B18(5834), B56(4100), A24(1204)	120	380			POS	DR52(15010), DP402(21264)	250	329	YES
2400	60	40	221			POS	B18(4932), B56(3199)	80	128			POS	DR52(16271), DP4(21578)	103	426	YES
3135	60	1,2	1101	1,8		POS						NT		611		NO
3224	60	70	141			POS	B18(7574), B56(4300), A24(1934)	140	274			POS	DR52(18612), DP402(21645)	255	239	YES
3625	60	40MCS	101			POS	B18(3867), B56(2801)	40MCS	179			POS	DR52(9043), DP402(13626)	161	115	NO
3753	60	50	116			POS	B18(4280), B56(2201)	100	164			POS	DR52(16250), DP402(22297)	241	410	NO
3966	60	20	154			POS		50	217			POS		143	291	NO
4345	60					POS						POS				NO
4661	60	10	102			POS	B18(1796), B56(1702)	10	206			POS	DR52(8758), DP402(15011)	210	332	YES

Table 11. Individual Flow crossmatch results and DSA reported for Cell #056 vs. Serum #060 - cont.

Center	Serum no	T Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T Cell NEG Control MC	B Cell NEG Control MC	Pronase Treated
5219	60	1		13.9		POS		1.2		112		POS		0.305	0.407	NO
8001	60	50	143			POS	B18(6291), B56(4093), A24(1559)	100	346			POS	DR52(18172), DP4(21980)	258	308	YES
8050	60	50	108		2567	POS	B18(6150), B56(3760),	120	185		56996	POS	DR52(15590), DP402(22681)	130	339	NO
8083	60	90	127			POS	B18(4755)	150	105			NEG	DR52(15025), DP4(18749)	281	449	YES
8096	60	>=50	36.2			NEG	no DSA	Not Tested				NT	DR52(13486), DR12(11315)	25	NT	NO
8103	60	NT				NT	B18(2087), B56(1353), A24(544)	NT				NT	DR52(4498), DP402(11207)			NO

Single Antigen Results

Table 12. Summary of Single Antigen results for Serum #057

Class I								Class II							
*** Serum 57 ***								*** Serum 57 ***							
18 typing Labs								18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max	Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A3	18	100%	5620	5213	1771	1330	7706	DR15	18	100%	9763	9023	2821	2304	13086
B27	18	100%	8191	7210	2468	2142	10383	DR16	18	100%	6246	5837	1895	1523	8420
B42	18	100%	7552	6640	2607	720	10194	DR51	18	100%	11900	11047	2843	4861	14414
B55	18	100%	5031	4422	1632	785	6668	DQ6	17	94%	10882	10784	3296	2965	15905
B56	18	100%	5056	4523	1705	670	6547	DQ8	15	83%	5690	5163	1899	1314	7858
B60	18	100%	9030	8297	2997	1318	11586	DQ9	15	83%	5564	5144	1702	1231	7949
B67	18	100%	7144	6386	2364	1102	9289	DPw4	7	38%	1512	1390	505	523	1970
B7	18	100%	15814	14186	4552	3580	18780	DP13	3	16%	1020	3072	3049	814	7382
B13	17	94%	4243	4078	1230	483	5665	DP401	3	16%	1928	1473	672	523	1970
A1	16	88%	2993	2738	940	284	3900	DQA1*01	2	11%	7391	7390	5902	1489	13292
B48	16	88%	9381	9053	2601	1017	11550								
B61	16	88%	5754	5592	1621	893	7860								
B73	16	88%	3307	3070	847	474	4002								
A36	15	83%	2456	2334	872	454	3550								
Cw17	15	83%	7662	6882	1924	1318	8532								
A11	14	77%	3342	3175	992	835	4203								
B54	14	77%	2880	2697	791	532	3716								
B81	14	77%	14499	13470	5191	1369	18822								
A80	13	72%	2527	2476	503	1214	3309								
B82	13	72%	4513	4072	1292	806	5342								
Cw18	13	72%	5302	4756	1455	605	6164								
Cw5	13	72%	2854	2905	740	1416	4329								
A24	12	66%	2198	1877	782	238	2842								
B47	12	66%	2212	2036	510	609	2567								
Cw6	12	66%	5013	4892	780	2830	5952								
Cw7	11	61%	2833	2689	597	1397	3761								
Cw15	10	55%	2624	2526	640	1374	3578								
A25	9	50%	1536	1402	626	312	2380								
A66	9	50%	1728	1543	716	334	2332								
B2708	8	44%	8067	7107	3288	2142	11787								
B57	8	44%	1284	1395	230	1159	1797								
B8101	7	38%	16891	12113	6640	1369	18136								
A1101	6	33%	2349	2241	1209	835	3689								
A1102	6	33%	2581	2438	1450	802	4079								
A32	6	33%	1421	1598	430	1207	2420								
A34	6	33%	1179	1282	253	1042	1786								

DSA present
Blue = DSA against cell #055 only
Gold = DSA against cell #056 only
Green = DSA aginst cell #055 and #56

Table 13. Summary of Single Antigen results Serum #058

Class I							
*** Serum 58 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B13	18	100%	20667	18765	5016	4413	23617
B18	18	100%	14988	13428	4661	1457	18746
B27	18	100%	11625	11366	2920	6395	15996
B35	18	100%	20062	18593	4351	8857	23117
B37	18	100%	9160	8551	3027	1773	13617
B38	18	100%	20669	18802	5231	6158	23882
B41	18	100%	21509	19878	4281	9470	24168
B44	18	100%	19734	17975	4463	7932	23352
B45	18	100%	21485	19969	3966	11462	24086
B47	18	100%	16666	15581	3731	6408	20508
B49	18	100%	20496	18698	4619	7519	23738
B50	18	100%	21426	19920	3799	11390	23768
B60	18	100%	22288	20889	3915	10976	24811
B61	18	100%	21871	20054	4804	6747	24844
B7	18	100%	6375	5951	1743	946	8596
B71	18	100%	21025	18807	5592	2446	23834
B72	18	100%	21279	19765	4273	9178	23903
B75	18	100%	19356	18011	4483	5633	23269
B76	18	100%	21591	20102	3999	10166	24370
A31	17	94%	4211	4179	1839	705	9926
B48	17	94%	21366	19949	4885	6742	24107
B51	17	94%	9543	8937	2452	1320	11634
B53	17	94%	12976	11929	3480	1848	16436
B62	17	94%	21268	19627	4247	10363	23570
B77	17	94%	13860	12810	3399	2740	16176
B59	16	88%	6007	5723	1421	1952	9153
B64	16	88%	6297	6053	1088	3275	8234
A30	15	83%	2469	2949	2190	610	10650
B39	15	83%	19994	19177	4378	8003	24020
B73	15	83%	3320	3413	813	1682	5302
B52	14	77%	2571	2699	872	1026	4400
B78	14	77%	12035	11141	3378	1679	14217
B81	13	72%	14560	13498	3329	5636	16727
Cw8	11	61%	2511	2144	685	664	2822
Cw5	9	50%	2240	2069	371	1423	2536
B2708	8	44%	12607	11486	3122	6732	15996

Class II							
*** Serum 58 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR1	18	100%	15623	14501	3251	5128	17721
DR4	18	100%	21742	20933	2712	13928	24600
DR53	18	100%	20150	19096	3666	10386	22869
DR10	17	94%	8478	7756	2249	2786	10337
DR16	17	94%	3486	3935	1410	1550	7027
DR15	16	88%	4090	3947	1222	1959	5828
DR7	15	83%	3363	3042	968	1229	4589
DR14	12	66%	5880	5527	783	3445	6299
DR11	7	38%	1421	1408	302	875	1802
DR51	6	33%	1384	1416	130	1264	1586
DR13	5	27%	1536	1607	362	1306	2301
DR8	4	22%	831	839	327	462	1235
DR103	3	16%	1214	1066	247	719	1266
DQ8	2	11%	2132	2132	103	2029	2235
DR9	2	11%	3277	3277	2738	539	6015
DQ4	1	5%	857	857	-	857	857
DQ7	1	5%	361	361	-	361	361
DQ9	1	5%	320	320	-	320	320
DQA1*03	1	5%	2235	2235	-	2235	2235

DSA present

Blue = DSA against cell #055 only

Gold = DSA against cell #056 only

Green = DSA aginst cell #055 and #56

Table 14. Summary of Single Antigen results Serum #059

Class I							
*** Serum 59 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B35	18	100%	7950	7300	2534	1560	11138
B42	18	100%	9131	8401	2906	1376	12658
B44	18	100%	14300	12989	4099	4190	18070
B45	18	100%	17434	15964	4585	5285	20653
B50	18	100%	8782	8061	2941	1786	12923
B54	18	100%	7610	6952	2403	1892	10735
B55	18	100%	6728	6305	2115	1717	9430
B56	18	100%	8209	7450	2778	1604	11770
B60	18	100%	7173	6640	2513	1001	10935
B61	18	100%	7861	7072	2664	1063	11279
B62	18	100%	7220	6823	2360	1593	10688
B64	18	100%	6504	6057	2353	1192	9887
B67	18	100%	9541	9004	3154	2161	13952
B7	18	100%	8571	7992	2785	1852	12456
B72	18	100%	7131	6743	2413	1208	10960
B75	18	100%	7992	7187	2829	1108	12069
B76	18	100%	16292	14554	4588	4914	19650
B8	18	100%	8553	7768	2637	1800	11692
B18	17	94%	7409	7160	2586	1142	10742
B39	17	94%	8131	7895	2702	2063	12468
B41	17	94%	8081	7722	2703	1413	11930
B48	17	94%	6672	6472	2167	909	9714
B71	17	94%	7801	7492	2187	1464	11282
B65	16	88%	4037	3900	1127	884	5874
B78	15	83%	6175	5706	2033	1100	8013
B81	14	77%	8400	7184	3002	824	10117
B82	14	77%	13364	11844	3891	3386	16390
B2708	11	61%	8370	8038	3286	2526	13620
B52	10	55%	1738	1786	265	1418	2401
B27	9	50%	9103	8500	3224	2526	11715
B49	8	44%	1559	1695	445	1163	2475
B8101	7	38%	8584	6650	3964	824	12059
B3901	5	27%	4885	5701	3461	2063	10355
B7801	5	27%	7028	5514	3527	1100	9843
B8201	5	27%	14500	13488	3049	8111	17005
Bw6	4	22%	9262	11236	5526	5917	20506

Class II
*** Serum 59 ***
18 typing Labs
class II negative

DSA present
Blue = DSA against cell #055 only
Gold = DSA against cell #056 only
Green = DSA aginst cell #055 and #56

Table 15. Summary of Single Antigen results Serum #060

Class I							
*** Serum 60 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A2	18	100%	16378	15429	4801	4662	21119
A68	18	100%	11865	11045	3643	2785	15677
A69	18	100%	11805	10578	4054	2263	15308
B57	18	100%	11701	11173	3442	3287	15628
B58	18	100%	11106	10375	3395	2489	14405
B72	18	100%	3374	3468	1153	1432	6599
B18	17	94%	5369	5282	1639	1796	8291
B45	17	94%	3466	3640	1169	1302	6624
B64	17	94%	5185	4978	1376	1961	7280
B65	17	94%	6646	6643	1576	2154	8928
B75	17	94%	3358	3340	1123	840	5583
B13	16	88%	3271	3365	1269	787	6337
B27	16	88%	3597	3734	1154	1745	6764
B35	16	88%	3405	3435	1135	1497	6356
B49	16	88%	3213	3403	1192	1467	6452
B50	16	88%	3146	3303	1137	1392	6304
B51	16	88%	4228	4345	1346	1396	7062
B52	16	88%	3644	3941	1201	1358	6370
B54	16	88%	3380	3430	1080	1457	6076
B55	16	88%	3157	3159	977	1351	5733
B56	16	88%	3238	3384	1101	1353	6155
B71	16	88%	3455	3502	1197	1723	6842
B78	16	88%	4235	4179	1238	1811	7158
B44	15	83%	3618	3613	1169	1607	6066
B46	15	83%	2854	2884	1180	752	5966
B62	15	83%	3028	3031	1125	1278	6177
B67	15	83%	2767	2865	1078	1166	5771
B76	15	83%	3206	2985	1007	1324	5469
B37	14	77%	2993	3142	1129	1534	5869
B38	14	77%	2511	2507	1113	682	5699
B47	14	77%	2799	2913	1066	1288	5560
B53	14	77%	2687	2861	1128	1106	5877
B63	14	77%	3013	2959	1033	1395	5697
B77	14	77%	2787	2886	1129	1004	5863
B39	13	72%	2640	2903	1094	1477	5798
B59	13	72%	2645	2716	910	1174	4960

Class II							
*** Serum 60 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DPw2	18	100%	18047	17411	2795	10419	20578
DPw3	18	100%	18123	16733	3916	8466	21550
DQ2	18	100%	5475	5845	3124	604	14343
DR11	18	100%	18606	17880	2512	11298	20920
DR13	18	100%	9375	8670	3539	1542	13671
DR14	18	100%	7973	7660	3148	1517	12106
DR17	18	100%	17418	16515	4280	5487	21350
DR18	18	100%	16380	15437	3915	5758	19441
DR52	18	100%	15122	14344	3619	4498	18612
DP14	17	94%	16176	15439	2766	8198	18440
DP17	17	94%	15229	14881	2648	7793	18148
DP18	17	94%	21124	19609	3575	9800	23846
DP28	17	94%	20398	19013	3409	10171	23166
DP10	15	83%	19019	18156	2139	12867	20748
DP20	15	83%	17166	16899	1789	12928	19573
DP9	15	83%	17840	17565	1978	12428	20196
DPw6	15	83%	16723	16704	2152	11113	19901
DR7	15	83%	2761	2563	876	501	3835
DP402	11	61%	20404	18590	3718	11207	22681
DPw4	7	38%	19351	18709	3937	11207	23089
DR16	2	11%	4082	4081	3634	448	7715
DR3	2	11%	7258	7258	1500	5758	8758
DPA1*01	1	5%	20425	20425	-	20425	20425
DPA1*02	1	5%	21178	21178	-	21178	21178
DPA1*03	1	5%	16691	16691	-	16691	16691
DPA1*04	1	5%	18290	18290	-	18290	18290
DPw1	1	5%	13620	13620	-	13620	13620
DQ4	1	5%	10753	10753	-	10753	10753
DQ6	1	5%	13416	13416	-	13416	13416

DSA present

Blue = DSA against cell #055 only
Gold = DSA against cell #056 only
Green = DSA aginst cell #055 and #56

Table 16. Individual laboratory results for Serum #057 - class I by Luminex

Center	A3	B27	B42	B55	B56	B60	B67	B7	B13	A1	B48	B61	B73	A36	Cw17	A11	B54	B81	A80	B82	Cw18	Cw5	A24	Cw7	Cw6	Other	Manufacturer
23	5681	8057	7835	5378	5723	8427	7433	14187	4505	3372	8696	5770	3896	3012	6322	3872	3344	13399	2649	4558	4884	3584	2842	2782	4623	A66,A25,A34>	One Lambda
54	6717	10383	8761	5654	5729	11060	8558	18586	5157	3485	11273	7290	3652	3119	8431	4203		18822	2550	5342	6164	3275	2466		5952	A66,A25,B47>	One Lambda
206	7062	9061	8924	5694	5945	10771	8975	17343	4905	3307	10716	6349	3478			3775		17828		5296							One Lambda
230	5347	6452	6825	4489	4659	8873	6483	14139	4243	2728	8645	5466	2963	2456	7543	3212	2486	14265	2110	4038	4996		2000		4578	B2708	One Lambda
774	4685	5890	6314	4356	4251	7841	6103	14352	3787	2380	8176	4963	2811		7045	3268	2477	14374	2731	3800						B2708	One Lambda
792	5245	8528	6865	4491	4710	8692	6692	14668	4130	2528	8590	5303	2881	2305	6076	3176	2688	14624	1971	4189	4667	2516	1874	2845	4222	A66,A25,A26>	OneLambda
836	7072	9374	8205	6668	5942	10749	7664	18123	5033	3204	10970	6992	3301	2923	8532		2957			2527	5302	2705	2231	2079	5106	A25,A26,A34>	One Lambda
1160	5049	8106	7395	5226	4964	9186	6854	15918	3737	2855	9404	5513	3252	2441	5241	3340	3311	14295	2236	4513		1416		2231	1397	A66,A25,A34>	One Lambda
2400	5558	8276	8135	4936	5147	10376	7463	17331	3880	2992	10570	6047	3584	2710	7936	3343	3368	17741	2515	4799	5111	3439	2241	3761	4855	A66,B47,Cw15	One Lambda
3224	7706	8615	10194	5687	6547	11586	9289	18780	5665	3900	11550	7860	4002	3550	7662		3716		2794		5883	2656	2616		5659	A25,A34,A32>	One Lambda
3625	2739	3775	4036	2613	2619	5167	3895	9523	2382		5123	3094	1767	1157	4318		1525		1214		2567	1696		2990	2830	B8101,B8201>	One Lambda
3753	5737	7015	6988	4472	4666	8708	6851	15933	3099	2602	9013	5048	2790	2078	8220	3312	2525	15882	3070	4103	5412	2854		2833	4920	B47	One Lambda
4661	1517	2515	720	785	679	1318	1102	3580		284				454		835		1369						238	3259	A66,B703>	Lifecodes
8001	6296	9608	8320	5126	5592	10771	7806	17842	5013	3126	11176	6840	3313	2754	8131	3779	2931	18136	2517	4836	5467	3336	2165	2483	5590	A66,A25,A34>	One Lambda
8050	5887	8301	7708	5222	5331	9332	7584	15710	3352	2993	9358	5738	3624	2228	8062	3397	3083	16411	3309	4946	5449	2791	1034	2883	5183	A66,B57,Cw2,C	One Lambda
8083	6460	9669	8275	5639	5740	10339	7756	16933	4686	3406	10581	6316	3338	3108	8400	4037					5326	3174			5190	B8101,B8201	One Lambda
8096	3759	4017	2935	2352	2508	3710	3259	7929	5279							2828		7304	1718		4329					B47,B49,Cw1	One Lambda
8103	1330	2142	1093	825	670	2452	1193	4481	483	659	1017	893	474	729	1318	902	532	4132		806	605		596	2269		B40,A66,B703>	Lifecodes
Avg	5214	7210	6640	4423	4523	8298	6387	14187	4079	2739	9054	5593	3070	2335	6882	3175	2698	13470	2476	4073	4756	2905	1878	2689	4892		
Std Dev.S	1822	2539	2682	1680	1755	3084	2432	4684	1267	970	2687	1674	875	903	1992	1030	821	5387	524	1345	1514	770	817	626	814		
MFI %CV	35%	35%	40%	38%	39%	37%	38%	33%	31%	35%	30%	30%	28%	39%	29%	32%	30%	40%	21%	33%	32%	27%	44%	23%	17%		

DSA present

Blue = DSA against cell #055 only

Gold = DSA against cell #056 only

Green = DSA aginst cell #055 and #56

Table 17. Individual laboratory results for Serum #058 - class I by Luminex

Center	B13	B18	B27	B35	B37	B38	B41	B44	B45	B47	B49	B50	B60	B61	B7	B71	B72	B75	B76	A31	B48	B51	B53	B62
23	17507	14435	9674	18036	10243	17721	19461	15880	19805	13646	17549	18569	20063	18388	5419	18918	20120	15799	18868	3315	19413	8987	12838	18020
54	23617	17798	15977	22423	10614	23308	24168	22879	23928	19144	23429	23286	24811	24606	7617	23814	23433	22884	24370	4622	23895	11634	14786	23347
206	19989	14988	13037	20118	6721	20411	21258	18223	21008	16827	20166	21129	22071	21297	6832	21049	20914	17790	21369	5197	21039	7592	13177	20711
230	19264	13326	9474	18313	7459	19262	18994	17505	19114	14650	18206	19247	20316	19892	5673	19522	19239	18367	19991	3688	19797	9543	12194	18932
774	22045	14988	10986	20710	8938	21736	21923	20868	22286	17440	20826	21722	22762	22642	6472	21775	21967	20952	21982	3696	22130	10243	12976	21342
792	20058	14618	12738	18476	10284	19957	20486	19335	19654	14720	19463	20521	21042	20637	5424	21000	20410	19893	20905	3812	20073	9766	11325	19768
836	21636	15326	14938	22157	9382	23882	21760	20806	21961	16505	21140	22009	23026	24844	8075	23685	21822	20686	22309	5018	24107	10826	13155	23310
1160	21825	18746	12264	23117	13617	20927	23569	22123	23095	20508	22538	23406	23760	23361	6645	23834	23903	22526	23185	3185	23176	11387	16436	22829
2400	22934	17457	13399	22685	11548	23653	24034	21040	24029	19433	22806	23768	24667	23756	6102	2446	23790	20535	23721	4461	23937	8358	14360	23389
3224	21275	15796	10295	20005	11006	21373	22086	21263	22324	17452	20857	22300	22504	22444	6646	21715	21643	20918	21812	4406	21366	11029	12680	21268
3625	16131	9124	6395	16719	6014	14826	17873	15684	17448	12115	14914	17769	19643	17438	3432	17309	17348	16585	18169	1740	16921	6320	7492	17145
3753	21828	15649	13063	21647	7356	22391	22627	20218	22935	18851	22385	23281	23403	22763	6277	22662	23091	19578	23244	4933	23013	7012	13295	22849
4661	4413	1457	6732	8960	1773	7324	9470	8770	11462	6408	7519	11390	10976	6747	946	11271	9178	5633	12572				1848	10384
8001	23568	17553	15996	22536	9529	23275	24018	23352	24086	19074	23738	23478	24397	24428	7076	23535	23471	23269	23512	4905	23891	11304	14336	23570
8050	21476	16180	13952	21417	12959	22462	23253	20133	23295	18415	22405	22783	24452	23215	8596	23315	23020	19133	23566	4211	23298	9218	14538	22558
8083	18032	12816	9484	15902	7569	17505	18072	15945	17340	14080	16221	17081	18746	19163	4577	16660	17282	17125	17857	3225	16821	9621	10759	
8096	11893	5246	8168	8857	4351	6158	12876	7932	12522	8997	11533	12451	12215	12333	4457	11396	11125	11089	10166	9926	9524	7777		10363
8103	10288	6202	8024	12611	4562	12279	11879	11599	13157	12206	10879	14373	17159	13034	6869	14636	14022	11449	14253	705	6742	1320	6608	13878
Avg	18766	13428	11366	18594	8551	18803	19878	17975	19969	15582	18699	19920	20890	20055	5952	18808	19765	18012	20103	4179	19950	8937	11930	19627
Std Dev.S	5162	4796	3005	4477	3114	5383	4405	4593	4080	3839	4753	3909	4029	4944	1794	5755	4397	4613	4115	1895	5035	2527	3587	4378
MFI %CV	28%	36%	26%	24%	36%	29%	22%	26%	20%	25%	25%	20%	19%	25%	30%	31%	22%	26%	20%	45%	25%	28%	30%	22%

DSA present

Blue = DSA against cell #055 only

Gold = DSA against cell #056 only

Green = DSA aginst cell #055 and #56

Table 17. Individual laboratory results for Serum #058 - class I by Luminex (cont.)

Center	B77	B59	B64	A30	B39	B73	B52	B78	B81	Cw8	Cw5	B2708	B65	A66	A6602	B3901	B7801	B8101	A33	B14	B703	Other	Manufacturer
23	12201	6328	8234	1950	18733	3210	3878	13120	13122	1477	1423		2791	1170					722				One Lambda
54	16176	6634	7157	3036	22887	4260	2547	14217	16727	2511	2081		1686	2327									One Lambda
206	14730	6107	5407		19988	3718		11869	14560														One Lambda
230	12119	5231	5775	2242	18215	3069	2422	11397	13978		11744												One Lambda
774	13860	5224	5613	2232	19994	3746	2741	12009	15142		13783												One Lambda
792	12681	5596	5909	2469	19223	2935	2486	11407	13150	2059	1601		1444	1736					824				One Lambda
836	14788	6240	6599	3471	24020	3233	2401			2822	2443	13469	1557		2103	20728	12516	14854	1119			B3902,B4005	One Lambda
1160	15637	9153	6846	1996	22103	2935	4400	12737	12581						2076								One Lambda
2400	15199	6076	6489	2852	22049	3320	3029	13699	15443	2554	2240			2400									One Lambda
3224	13142	5938	6484	2661		3702	2766			2182	1729	13664	1304		1874	20261	12619	14944					One Lambda
3625	8888	4120	4505	1184		1682	1551			1240		8481	1220		1117	14439	7969	9490					One Lambda
3753	14506	5185	5382	3272	21576	3585	2039	12060	15645	2783	2536				2182								One Lambda
4661	2740				8003			1679				6732		553		8003	1679			797	740		Lifecodes
8001	15720	6151	6354	3234	22584	4151	2595	13810	16307	2576	2245	15996	1329	2335	2335	22584	13810	16307					One Lambda
8050	15232	6513	6582	2376	21526	5302	3907	12579	16234	2724	2328		1222		1874								One Lambda
8083	12597	5131	6240		16224			10221										11828					One Lambda
8096			10650					6949								11735						A1102,A23>	One Lambda
8103	7555	1952	3275	610	10542	2356	1026	5183	5636	664		8024		2201	2201	10542	5183	5636		3275	6869	B15,B40,B7C	Lifecodes
Avg	12810	5724	6053	2949	19178	3414	2699	11142	13498	2145	2070	11487	1569	1817	1970	15470	8963	12177	888	2036	3805		
Std Dev.S	3503	1467	1124	2267	4532	842	905	3506	3465	718	393	3338	520	712	379	5719	4854	4050	206	1752	4334		
%CV	27%	26%	19%	77%	24%	25%	34%	31%	26%	33%	19%	29%	33%	39%	19%	37%	54%	33%	23%	86%	114%		

DSA present

Blue = DSA against cell #055 only

Gold = DSA against cell #056 only

Green = DSA aginst cell #055 and #56

Table 18. Individual laboratory results for Serum #059 - class I by Luminex

Center	B35	B42	B44	B45	B50	B54	B55	B56	B60	B61	B62	B64	B67	B7	B72	B75	B76	B8	B18	B39	B41	B48	B71	Other	Manufacturer
23	8869	9907	11075	15556	9794	8552	7984	9294	8159	8746	8881	7507	10846	9643	8240	7721	13647	9809	9245	9451	9072	7961	9173	B49,B27>	One Lambda
54	9691	11501	17693	20653	10729	9387	8548	10351	9298	9700	8816	9341	12452	10828	9036	10194	19650	10459	9440	10591	9848	8219	9580	B27,B52	One Lambda
206	8775	10447	15393	18814	9729	8573	7528	9292	8084	8769	8234	7233	11376	10045	8421	8112	17639	9648	8815	9834	9598	7702	8679	B27	One Lambda
230	8048	9015	14096	16634	8792	7524	6360	7722	7106	7757	7588	6354	9644	8485	7117	8446	16859	8540	7499	8131	8354	6596	7541	B2708	One Lambda
774	7806	8485	13708	17831	8357	6954	6301	7485	6791	7183	7035	6118	9437	7942	6951	7899	15450	7843	7399	7954	7701	6633	7524	B2708	One Lambda
792	7813	9170	14599	17036	8771	7602	6723	8212	7469	7965	7156	6523	9720	8495	7234	8085	16445	8739	7335	8512	7989	6672	7801	B49,B13>	One Lambda
836	8416	9457	15811	18090	9705	7617	7725	8598	7813	8678	7978	7232	10001	9280	7957	8624	17430	8566	7992	7325	8853	8639	8040	B49,B52>	One Lambda
1160	7767	9052	13283	15925	8254	7803	6905	7579	6589	6770	7126	5266	8727	8646	6997	6961	14455	7309	7175	8118	8081	6087	7082	B49,B2708	One Lambda
2400	8156	9458	14416	18583	8757	7675	6443	8222	7093	7291	7126	6485	9236	8089	6673	7617	17204	8627	7295	7947	7922	6238	7316	B27,B52	One Lambda
3224	11138	12658	18070	20337	12923	10735	9430	11770	10935	11279	10688	9887	13952	12456	10960	12069	18454	11692	10742	12468	11930	9714	11282	B49,B52>	One Lambda
3625	4911	5329	10136	12443	4902	4054	4032	4587	4060	4265	4587	3771	5649	5435	4104	6008	10420	4633	3881		4614	3591	4321	B49,B52>	One Lambda
3753	6489	7450	14518	18219	7263	6227	5336	6636	5961	6372	5852	5509	8098	7182	5906	6116	16138	6740	6557	6790	6949	5542	6441	B52,B2708	One Lambda
4661	1560	1376	4190	5288	1786	1892	1719	1604	1001	1063	1593	1192	2180	1852	1208	1108	4914	1824	1142	2063	1413		1464	B27,B703>	Lifecodes
8001	9472	10439	17398	20506	10700	9179	8592	10173	8980	9705	9208	8170	12192	10566	9063	10161	19267	9890	9725	10355	10155	8300	9486	B49,B27>	One Lambda
8050	8832	10284	14566	19216	9689	8340	7223	9164	7873	8171	7755	7487	11316	9658	7819	8107	17857	9493	8550	9649	9095	7205	8585	B52,Bw6>	One Lambda
8083	7852	9091	14183	16887	9121	7233	6732	8206	7239	8065	7283	6786	9306	8723	7144	8222	14734	7995	7409	8336	8042	7171	7803	B27,B8101	One Lambda
8096	3906	6108	6387	10049	3704	3839	4201	3511	3342	3939	4173	2513	5793	4435	4976	2204	6112	6230		4580		2859	5254	A24,B49>	One Lambda
8103	1916	1994	4286	5285	2136	1966	1717	1711	1732	1589	1748	1653	2161	2111	1582	1728	5309	1800	1524	2115	1660	909		A24,B40>	Lifecodes
Avg	7301	8401	12989	15964	8062	6953	6306	7451	6640	7073	6824	6057	9005	7993	6744	7188	14555	7769	7160	7895	7722	6473	7492		
Std Dev.S	2607	2990	4218	4718	3026	2472	2177	2858	2586	2741	2428	2421	3245	2865	2483	2911	4721	2714	2666	2785	2786	2233	2255		
%CV	36%	36%	32%	30%	38%	36%	35%	38%	39%	39%	36%	40%	36%	36%	37%	41%	32%	35%	37%	35%	36%	35%	30%		

DSA present

Blue = DSA against cell #055 only

Gold = DSA against cell #056 only

Green = DSA aginst cell #055 and #56

Table 19. Individual laboratory results for Serum #060 - class I by Luminex

Center	A2	A68	A69	B57	B58	B72	B18	B45	B64	B65	B75	B13	B27	B35	B49	B50	B51	B52	B54	B55	B56	B71	B78	B44	B62	A24	Other	Manufacturer
23	15436	12311	12467	12753	12166	6599	8291	6624	7280	7910	5583	6337	6764	6356	6452	6304	6634	6183	6076	5733	6155	6842	7158	6066	6177	1658	B46,B47>	One Lambda
54	21119	15476	14025	15628	14017	4496	6992	4788	6511	8109	4402	4488	5164	4181	4363	4237	4069	4563	4274	3890	4261	4289	5458	4806	3598	1701	B46,B47>	One Lambda
206	18620	14439	14093	13531	13215	3479	5843	3653	5458	7562	3309	3429	3778	3414	3319	3093	3810	3649	3168		3277	3286	4469	3898				One Lambda
230	16249	12096	13167	11804	10758	3678	5648	3911	5185	6629	3804			3692		3553			3525	3362	3533	3742	4574		3235		B46,B39>	One Lambda
774	15156	10801	10265	11597	11117	3233	5011	3381	4925	6181	3230	3204	3037	3266	3170	3090	4230	3536	3048	2844	3137	3346	4009	3340	2769		B46,B47>	One Lambda
792	17208	11909	10550	11402	11136	3268	5087	3466	5192	6422	3358	3303	3714	3216	3256	3168	4225	3638	3235	2845	3185	3328	4092	3618	2816	1406	B46,B47>	One Lambda
836	20096	13615	13820	13024	11770	3233	5369	3294	5334	7165	3305	3238	3479	3338	3007	3123	4246	3446	3021	3402	3094	3564		3467	3028	1763	B46,A203>	One Lambda
1160	16382	11085	11266	11329	10640	4252	5834	4246	4925	5928	4264	4167	4175	4091	4426	4002	4831	4752	4342	3984	4100	4370	4478	4388	3764	1204	B46,B47>	One Lambda
2400	17834	11815	12155	12388	11037	2885	4932	3415	5113	6646	3395	3091	3194	3396	2752	2649	3788	3569	3633	2809	3199	2668	4109	2985	2773		B46,B47>	One Lambda
3224	20801	15677	15308	15444	14405	4603	7574	4698	6499	8445	4400	4549	4542	4348	4449	4025	5637	4664	4464	3721	4300	4484		4801	3634	1934	B46,A203>	One Lambda
3625	10615	6345	6102	7831	7132	2767	3867	3134	3878	4246	3016	2992	2777	2495	2894	2820	3207	2863	2522	2803	2801	2715	3319	3138	2426		B46,B47>	One Lambda
3753	16373	11820	12216	11567	11094	2389	4280	2416	4386	6218	1988	2217	2483	2276	2250	2227	2813	2773	2303	1993	2201	2198	3303	2242	1812		B46,B47>	One Lambda
4661	5551	3719	2494	3459	2489	1432	1796	1956	1969	8928	840	787	2868	1497	1523	1392			1995	1865	1702	1810	1920	1726	1278		B46,A203>	Lifecodes
8001	20442	14843	14444	14305	13620	4198	6291	4478	5906	7543	4104	4138	4756	4046	4196	3967	5435	4332	4108	3629	4093	3898	5109	4490	3376	1559	B46,B47>	One Lambda
8050	16439	12133	10982	13403	13078	3838	6150	4021	5826	7174	3378	3646	3911	3815	3799	3768	4261	4108	3714	3314	3760	3775	4831	3624	3340		B46,B47>	One Lambda
8083	16153	10807	11454	10912	9577	3011	4755	3106	4292	5676	3141	3051	3368		3139		3891	3252					3870					One Lambda
8096	8587	7137	3345	7466	6767	3576											7062	6370		2999			4360				Cw9,Cw8	One Lambda
8103	4662	2785	2263	3287	2743	1487	2087	1302	1961	2154	1273	1213	1745	1533	1467	1438	1396	1358	1457	1351	1353	1723	1811	1607	1447	544	B46,A203>	Lifecodes
Avg	15429	11045	10579	11174	10376	3468	5283	3641	4979	6643	3341	3366	3735	3435	3404	3304	4346	3941	3430	3159	3384	3502	4179	3613	3032			
Std Dev.S	4940	3748	4172	3542	3493	1186	1689	1205	1419	1624	1158	1311	1192	1173	1231	1175	1390	1240	1116	1009	1137	1236	1278	1210	1165			
MFI %CV	32%	34%	39%	32%	34%	34%	32%	33%	28%	24%	35%	39%	32%	34%	36%	36%	32%	31%	33%	32%	34%	35%	31%	33%	38%			

DSA present

Blue = DSA against cell #055 only

Gold = DSA against cell #056 only

Green = DSA aginst cell #055 and #56

Table 20. Individual laboratory results for Serum #057 - class II by Luminex

Center	DR15	DR16	DR51	DQ6	DQ8	DQ9	DPw4	DP13	DP401	Other	
23	6902	4159	8624	7837	3101	3600					One Lambda
54	12696	8420	13823	15905	7858	7700	1958				One Lambda
206	9921	6997	12351	10572	7302	5564					One Lambda
230	8369	5695	9967	10451							One Lambda
774	9806	5741	11860	12340	5690	5701					One Lambda
792	10014	6523	11266	12132	5793	5713	1646	814		DR53,DPw1,DPw5,DP11 >	One Lambda
836	11605	7841	13301	13292	6180	6008	1970	1020	1970	DPA1*01,DPA1*02,DQA1*01,DQA1*02 >	One Lambda
1160	9683	6036	11939	12889	6390	6287					One Lambda
2400	9720	6456	12584	9477	3593	4016					One Lambda
3224	13086	8157	14414	15659	7846	7949			1928		One Lambda
3625	5178	3117	6130	7860	3680	3691	1260				One Lambda
3753	10265	6577	14057	9772	2972	3415					One Lambda
4661	3618	2243	7645	2965	1314	1231	861				Lifecodes
8001	11400	7623	13378	13988	6431	6380	1512				One Lambda
8050	10364	6616	13610	10882	3875	4459					One Lambda
8083	8797	5370	11641	11748	5426	5459					One Lambda
8096	8688	5982	7400	5565				7382			One Lambda
8103	2304	1523	4861				523		523	DQA1*01	Lifecodes
Avg	9023	5838	11047	10784	5163	5145	1390	3072			
Std Dev.S	2902	1950	2925	3397	1966	1761	546	3734			
MFI %CV	32%	33%	26%	32%	38%	34%	39%	122%			

DSA present

Blue = DSA against cell #055 only

Gold = DSA against cell #056 only

Green = DSA aginst cell #055 and #56

Table 21. Individual laboratory results for Serum #058 - class II by Luminex

Center	DR1	DR4	DR53	DR10	DR16	DR15	DR7	DR14	DR11	DR51	DR13	DR8	DR103	Other	
23	10212	13928	13402	6216	1550	1959	2291	3445							One Lambda
54	17721	24600	22869	9275	4426	4777	3674	6299							One Lambda
206	13502	20222	19873	5204	3435	3532		5052							One Lambda
230	13883	18594	17322	8476	2993	2479	3600								One Lambda
774	16429	22881	21158	9345	6215	5828	2897	5965							One Lambda
792	15078	20987	19428	9086	3486	4200	3600	5239	875	1443	1329	578	719	DR9,DQ4,DQ7,DQ8 >	One Lambda
836	16167	23139	20638	8966	5027	4971	3759	5982	1138	1586	1565	1083		DQ8,DQA1*03	One Lambda
1160	17433	23304	21884	10113	3100	4685	4589		1581					DQA1*03:02, DQB1*03:02	One Lambda
2400	17108	23555	22722	10337	3368	3278	4301	6158							One Lambda
3224	17023	22511	20427	8040	5239	5648	3442	5618	1359	1303	1536				One Lambda
3625	13166	19813	19491	4459	2656	3979	3363	4687	1531	1324	2301	1235	1266		One Lambda
3753	16535	22673	22531	8478	4157	3345	2692								One Lambda
4661	9258	18099	16546	3939	2350	2288	1242	1421							Lifecodes
8001	17030	23403	22152	9281	4443	4397	2934	6018	1264						One Lambda
8050	16452	22496	22122	9416	7027	5488	2030	6066	1735						One Lambda
8083	14392	20430	18690	8443				5795							One Lambda
8096	14506	19276	10386		5006									DR9	One Lambda
8103	5128	16887	12089	2786	2427	2306	1229		1802		1306	462	1214		Lifecodes
Avg	14501	20933	19096	7756	3936	3948	3043	5527	1409	1417	1607	840	1066		
Std Dev.S	3345	2790	3772	2318	1454	1262	1002	818	326	142	405	377	302		
MFI %CV	23%	13%	20%	30%	37%	32%	33%	15%	23%	10%	25%	45%	28%		

DSA present

Blue = DSA against cell #055 only

Gold = DSA against cell #056 only

Green = DSA aginst cell #055 and #56

Table 22. Individual laboratory results for Serum #059 - class II by Luminex

Center	Class II Negative	
23		One Lambda
54		One Lambda
206		One Lambda
230		One Lambda
774		One Lambda
792		One Lambda
836		One Lambda
1160		One Lambda
2400		One Lambda
3224		One Lambda
3625		One Lambda
3753		One Lambda
4661		Lifecodes
8001		One Lambda
8050		One Lambda
8083		One Lambda
8096		One Lambda
8103		Lifecodes

Table 23. Individual laboratory results for Serum #060 - class II by Luminex

Center	DPw2	DPw3	DQ2	DR11	DR13	DR14	DR17	DR18	DR52	DP14	DP17	DP18	DP28	DP10	DP20	DP9	DPw6	DR7	DP402	DPw4	Other	
23	15504	14153	3638	15678	6649	4593	14413	12880	12180	13666	13459	16730	16317	15385	14569	14924	13476	2973	16921			One Lambda
54	20452	21550	4702	20920	13671	12106	21350	19441	18413	18440	18148	23846	23166	20748	19160	20196	19901	3113		23089		One Lambda
206	18398	16755	5237	17834	9316	7852	19043	17328	16163	16176	15663	19893	19930	18712	17166	17676	16073					One Lambda
230	16624	16845	2845	16927	9330	6385	16145	15282	13492	14031	13821	19771	16999	16306	14592	15887	15300	2456	18223			One Lambda
774	18941	19288	6664	18592	10149	9454	17640	16069	14520	16728	15156	21678	21213	19075	17066	17840	16723	2483	21220			One Lambda
792	17410	17856	7345	17203	10055	9534	16932	15990	15219	14719	15016	19605	19101	17096	15852	16616	16655	2828		19351	DR16,DQ7	One Lambda
836	17695	19109	8634	18620	11763	10857	19136	17724	17507	16090	15229	21178	20425	17461	16691	17311	17283	3118	20404		DR1403>	One Lambda
1160	19654	19833	6784	19761	7758	7465	17195	16306	15010	17607	16510	22277	21407	19076	18180	18433	18517	2566	21264			One Lambda
2400	19813	18849	4443	20064	6743	5636	18568	17719	16271	17733	16370	21124	21158	19062	18370	19390	16897	3548		21578		One Lambda
3224	18799	20114	8786	19321	12999	11380	19932	18868	18612	17446	16979	22026	20398	19019	17335	18566	18374	3835	21645			One Lambda
3625	14988	12184	5713	14205	1542	1517	9238	7803	9043	13017	11059	15131	14851	12867	12928	12428	11113	1533	13626			One Lambda
3753	20454	18134	4129	19836	9914	8517	20032	18615	16250	16887	16621	21559	21216	20618	17942	18605	16627	2592	22297			One Lambda
4661	14101	11406	1240	14365	2792	3306	8704	8758	8758	10433	11222	13851	13443					1019	15011	15011	DR3	Lifecodes
8001	19742	20736	7540	19734	11924	11195	19789	18985	18172	17981	17030	22736	22031	19893	18227	19678	19444	2761		21980		One Lambda
8050	20578	19101	3961	20456	9419	8094	19945	17714	15590	18052	17940	21984	21898	20554	19573	19301	17784	3130	22681			One Lambda
8083	16918	18112	8602	17329	8118	7534	16967	16173	15025	15263	14971	20170	19508	16479	15842	16630	16396			18749		One Lambda
8096	12909	8712	14343	19701	12174	10619	16757	16453	13486												DR8,DR12>	One Lambda
8103	10419	8466	604	11298	1749	1849	5487	5758	4498	8198	7793	9800	10171					501	11207	11207	DR3,DR5>	Lifecodes
Avg	17411	16734	5845	17880	8670	7661	16515	15437	14345	15439	14882	19609	19014	18157	16900	17565	16704	2564	18591	18709		
Std Dev.S	2876	4030	3214	2585	3642	3240	4404	4028	3724	2851	2729	3685	3514	2214	1851	2047	2228	907	3899	4252		
MFI %CV	17%	24%	55%	14%	42%	42%	27%	26%	26%	18%	18%	19%	18%	12%	11%	12%	13%	35%	21%	23%		

DSA present

Blue = DSA against cell #055 only

Gold = DSA against cell #056 only

Green = DSA aginst cell #055 and #56

Virtual Crossmatch - individual results

Table 24. Individual Virtual crossmatch results for Serum #059 vs. Donor #V1

Donor #V1 HLA A*11:01-A*26:01-B*18:01:01G-B*27:05:02G-C*06:08-C*07:01:01G/DRB1*03:02-DRB1*13:01-DRB3*01:01:02G-DRB3*02:02:01G-DQB1*04:02-DQB1*06:03-DPB1*01:01-DPB1*03:01

Center	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)	Virtual B-cell prediction	Class II DSA (MFI)	Risk Assessment	Comments
23	59		Positive	B18 (9245) Bw6 (9005)	Positive	None	Unacceptable	
54	59	95	Positive	B18 (9440)	Negative	None	Unacceptable	
206	59	94	Positive	B18 (8815)	Positive	None	Unacceptable	anti-B27 B18 present
230	59	85	Positive	B18 (7590)	Negative	None	Unacceptable	
774	59	9	Positive	B18 (7399)	Negative	None	Unacceptable	
792	59	97	Positive	B18 (7335)	Positive	None	Unacceptable	No C*06:08 on SAB panel
836	59		Positive	B27 (9729) B18 (7992)	Positive	None	Unacceptable - likely flow positive	Positive cut off is 1000 MFI for DSA and result is combined for T and B cell crossmtach
1160	59	93	Positive	B18 (7175)	Positive	None	Unacceptable	
1461	59		Positive	B18(2320)	Negative	None	Acceptable	low MFI antibody B*18:01
2400	59	9	Negative	B18 (7152)	Negative	None	Acceptable	DSA is C1q Negative
3224	59	96	Positive	B18 (10742)	Positive	None	Unacceptable	
3753	59	92.92	Positive	B18 (6557)	Positive	None	Acceptable	Acceptable with augmented immunosuppresion.
3966	59	95	Positive	B18 (9860) , B27(10139)	Negative	None	Unacceptable	DSA B18 , B27
4661	59	91	Positive	B18 (1142)	Positive	None	Unacceptable	Ab against Epitope 76ESN
5219	59		Positive	B18 (2376)	Negative	None	Unacceptable	
8001	59	95	Positive	B18 (9725)	Positive	None	Unacceptable	C*06:08, C*07:01 are not included in LSAB panel
8050	59	95	Positive	B18 (8550) Bw6 (9518)	Positive	None	Unacceptable	Positive B-cell prediction due to class I
8083	59	94	Positive	B18 (7409)	Positive	None	Unacceptable	
8096	59		Negative	None	Negative	None	Acceptable	
8103	59	35	Positive	B18 (1524) Bw6 (5917)	Negative	None	Unacceptable	

Table 25. Individual Virtual crossmatch results for Serum #059 vs. Donor #V2

Donor #V2 HLA A*30:02-A*74:01:01G-B*50:01-B*58:01-C*02:10-C*06:02:01G/DRB1*11:01-DRB1*12:01:01G-DRB3*02:02:01G-DQB1*03:01:01G-DQB1*06:11-DPB1*02:01-DPB1*18:01

Center	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)	Virtual B-cell prediction	Class II DSA (MFI)	Risk Assessment	Comments
23	59		Positive	B50 (9795) Bw6 (9005)	Positive	None	Unacceptable	
54	59	95	Positive	B50 (10729)	Negative	None	Unacceptable	
206	59	94	Positive	B50 (9729)	Positive	None	Unacceptable	anti-B50
230	59	85	Positive	B50 (8874)	Negative	None	Unacceptable	
774	59	2	Positive	B50 (8357)	Negative	None	Unacceptable	
792	59	97	Positive	B50 (8771)	Positive	None	Unacceptable	No C*02:10 bead on SAB panel; No DQB*06:11 bead on SAB panel
836	59		Positive	B50 (9705)	Positive	None	Unacceptable - likely flow positive	Positive cut off is 1000 MFI for DSA and result is combined for T and B cell crossmtach
1160	59	93	Positive	B50 (8254)	Positive	None	Unacceptable	
1461	59		Positive	B50 (2056)	Negative	None	Unacceptable	
2400	59	2	Negative	B50 (8642)	Negative	None	Acceptable	Class I DSA is C1q Negative
3224	59	95	Positive	B50 (12923)	Positive	None	Unacceptable	
3753	59	92.92	Positive	B50 (7263)	Positive	None	Acceptable	Acceptable with augmented immunosuppresion.
3966	59	95	Positive	B50 (11063)	Negative	None	Unacceptable	DSA B50
4661	59	91	Positive	B50 (1786)	Positive	None	Unacceptable	Ab against Epitope 76ESN
5219	59		Positive	B50 (3533)	Negative	None	Unacceptable	
8001	59	95	Positive	B50 (10700)	Positive	None	Unacceptable	C*02:10, DQB1*06:11 are not included in LSAB panel
8050	59	95	Positive	B50 (9689) Bw6 (9518)	Positive	None	Unacceptable	Positive B-cell prediction due to class I
8083	59	94	Positive	B50 (9121)	Positive	None	Unacceptable	
8096	59		Positive	B50 (3704) A30 (4542) A74 (5150)	Negative	None	Unacceptable	
8103	59	35	Positive	B50 (2136) Bw6 (5917)	Negative	None	Unacceptable	

Table 26. Individual Virtual crossmatch results for Serum #059 vs. Donor #V3

Donor #V3 HLA A*11:01-A*24:02-B*40:06-B*51:01-C*08:01:01G-C*14:02:01G/DRB1*09:01:02G-DRB4*01:01:01G-DQB1*03:03-DPB1*02:01-DPB1*05:01:01G

Center	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)	Virtual B-cell prediction	Class II DSA (MFI)	Risk Assessment	Comments
23	59		Positive	B61 (8746) Bw6 (9005)	Positive	None	Unacceptable	
54	59	95	Positive	B61 (9396)	Negative	None	Unacceptable	
206	59	94	Positive	B61 (8613)	Positive	None	Unacceptable	
230	59	85	Positive	B61 (7200)	Negative	None	Unacceptable	
774	59	4	Positive	B61 (6884)	Negative	None	Unacceptable	
792	59	97	Positive	B61 (7424) Cw8 (561) Cw14 (471)	Positive	None	Unacceptable	Repeat B61 mismatch
836	59		Positive	B40 (8083)	Positive	None	likely flow equivocal/ positive	Positive cut off is 1000 MFI for DSA and result is combined for T and B cell crossmtach
1160	59	93	Positive	B61 (5769)	Positive	None	Unacceptable	
1461	59		Positive	B61 (1529)	Negative	None	Acceptable	low MFI B*40
2400	59	4	Negative	B61 (7044)	Negative	None	Acceptable	Class I DSA is C1q Negative
3224	59	95	Positive	B61 (11096)	Positive	None	Unacceptable	
3753	59	92.92	Positive	B61 (6372)	Positive	None	Unacceptable	repeat mismatch
3966	59	95	Positive	B61 (8752)	Negative	None	Unacceptable	
4661	59	91	Positive	B61 (1063)	Positive	None	Unacceptable	Ab against Epitope 76ESN
5219	59		Positive	A24 (4579) A9 (5372) B40 (3611) B61 (2072)	Negative	None	Unacceptable	
8001	59	95	Positive	B61 (8915) Cw8 (569) Cw14 (516)	Positive	None	Unacceptable	
8050	59	95	Positive	B61 (8171) Bw6 (9518)	Positive	None	Unacceptable	Positive B-cell prediction due to class I
8083	59	94	Negative		Negative	None	Acceptable	
8096	59		Positive	A24 (3300) B61 (3939)	Negative	None	Unacceptable	B61 (3939), A24 (3300)
8103	59	35	Positive	A24 (545) Bw6 (5917)	Negative	None	Unacceptable	

Table 27. Individual Virtual crossmatch results for Serum #059 vs. Donor #V4

Donor #V4 HLA A*02:06-A*11:04-B*35:05-B*46:01-C*01:02:01G-C*04:01:01G/DRB1*09:01:02G-DRB1*15:02-DRB4*01:01:01G-DRB5*01:02:01G-DQB1*03:03-DQB1*05:01-DPB1*03:01:01G-DPB1*13:01:01G

Center	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)	Virtual B-cell prediction	Class II DSA (MFI)	Risk Assessment	Comments
23	59		Positive	B35 (8869) Bw6 (9005) Cw1 (1106)	Positive	None	Unacceptable	
54	59	95	Undetermined	B35 (9691)	Negative	None	Acceptable if FCXM negative	There is no B*35:05 bead in LS1 beads; Can't rule out allele specific DSA B35:05
206	59	94	Positive	B35 (8775)	Positive	None	Unacceptable	
230	59	85	Positive	B35 (8116)	Negative	None	Unacceptable	There is an allelic difference between the donor and the single antigen bead (B*35:01)
774	59	18	Positive	B35 (7806)	Negative	None	Unacceptable	
792	59	97	Positive	B35 (7813) Cw1 (735)	Positive	None	Unacceptable	No A*11:04 or B*35:05 bead on the SAB panel. Patient does have antibody to B*35:01 bead
836	59		Positive	B35 (8416)	Positive	None	Unacceptable - likely flow positive	Positive cut off is 1000 MFI for DSA and result is combined for T and B cell crossmtach
1160	59	93	Positive - Undetermined	B35 (7767)	Positive - Undetermined	None	Unacceptable- Undetermined	B*35:05 not present on antibody panel but serologic equivilant is B35.
1461	59		Positive	B35 (1817)	Negative	None	Unacceptable	
2400	59	18	Negative	B35 (8070)	Negative	None	Acceptable	Class I DSA is C1q Negative
3224	59	95	Positive	B35 (11138) Cw1 (1032)	Positive	None	Unacceptable	
3753	59	92.92	Positive	B35 (6489)	Positive	None	Acceptable	Acceptable with augmented immunosuppresion.
3966	59	95	Positive	B35 (9941)	Negative	None	Unacceptable	DSA B35
4661	59	91	Positive	A11 (835)	Positive	None	Unacceptable	Ab against Epitope 76ESN
5219	59		Positive	Cw4 (722) B35 (5478)	Negative	None	Unacceptable	
8001	59	95	Borderline	Cw1 (705)	Negative	None	Acceptable	A*11:04, B*35:05 not in LSAB panel
8050	59	95	Positive	B35 (8832) Bw6 (9518)	Positive	None	Acceptable	Positive B-cell prediction due to class I
8083	59	94	Negative		Negative	None	Acceptable	
8096	59		Positive	B35 (3906) Cw1 (3774)	Negative	None	Unacceptable	
8103	59	35	Positive	Bw6 (5917)	Negative	None	Unacceptable	

U = Undetermined

Table 28. Individual Virtual crossmatch results for Serum #060 vs. Donor #V1

Donor #V1 HLA A*11:01-A*26:01-B*18:01:01G-B*27:05:02G-C*06:08-C*07:01:01G/DRB1*03:02-DRB1*13:01-DRB3*01:01:02G-DRB3*02:02:01G-DQB1*04:02-DQB1*06:03-DPB1*01:01-DPB1*03:01

Center	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)		Virtual B-cell prediction	Class II DSA (MFI)	Risk Assessment	Comments
23	60		Positive	B27 (6764) B18 (8291) Bw4 (7070)		Positive	DR13 (6649) DR18 (12880) DR52 (12180) DPw3 (14153)	Unacceptable	
54	60	99	Positive	B27 (4540) B18 (6992)		Positive	DR13 (9780) DR18 (19441) DR52 (18336) DPw3 (21550)	Unacceptable	
206	60	97	Positive	B27 (3471) B18 (5843)		Positive	DR13 (7498) DR18 (17252) DR52 (16163) DPw3 (16756)	Unacceptable	
230	60	94	Positive	B18 (5723)		Positive	DR13 (6800) DR18 (15557) DR52 (13920)	Unacceptable	
774	60	68	Positive	B27 (3503) B18 (5011)		Positive	DR13 (7186) DR18 (16069) DR52 (11712) DPw3 (19288)	Unacceptable	
792	60	100	Positive	B27 (3221) B18 (5087)		Positive	DR13 (7647) DR18 (15990) DR52 (15014) DPw3 (17856)	Unacceptable	No C*06:08 bead on SAB panel. Patient is typed as B*27; SAB shows DSA to B*27:05 bead.
836	60		Positive	B27 (3479) B18 (5369)		Positive	DR13 (8652) DR18 (17724) DR52 (17507) DPw3 (19109)	Unacceptable - likely flow positive	Positive cut off is 1000 MFI for DSA and result is combined for T and B cell crossmtach
1160	60	99	Positive	B27 (4045) B18 (5834)		Positive	DR13 (6350) DR18 (16306) DR52 (14530) DPw3 (19833)	Unacceptable	The patient's typing is B27. Both B*27:08 and B*27:05 are strongly positive on SAB and cannot be ruled out by LSPRA. The patient's typing is unlikely to be B*27:05; and most likely has another variant of B27.
1461	60		Positive	B27 (1817) B18 (2320)		Positive	DR13 (2260) DR17 (6282) DR52 (5091) DPw3 (8785)	Unacceptable	
2400	60	68	Positive	B27 (2869) B18 (4801)		Positive	DR13 (5773) DR18 (17489) DR52 (15443) DPw3 (4849)	Unacceptable	DSA is Class I Positive; Class II DSA is C1q Positive; DP not included in % PRA
3224	60	96	Positive	B27 (4542) B18 (7574)		Positive	DR13 (8961) DR18 (18868) DR52 (18612) DPw3 (20114)	Unacceptable	
3753	60	99.27	Positive	B27 (2483) B18 (4280)		Positive	DR13 (9914) DR18 (18615) DR52 (16250) DPw3 (18134)	Unacceptable	
3966	60	99	Positive	B27 (4158) B18 (6675)		Positive	DR13 (9802) DR18 (17833) DR52 (16632) DPw3 (18058)	Unacceptable	DSA B18 B27; DR18 DR13 DR52 DP3
4661	60	99	Positive	B27 (2868) (3719) B18 (1796)		Positive	DR3 (8758) DR18 (8758) DR52 (7594) DPw3 (11406)	Unacceptable	Ab against Epitope 131S; Ab against Epitope 13SE
5219	60		Positive	B27 (9791) B18 (2438) Bw4 (6798)		Positive	DR3 (38783) DR6 (23024) DR13 (12189) DR18 (25496) DR52 (36539) DPw3 (18383)	Unacceptable	Reactivity to B*27 appears to be auto-reactivity in view of the recipient's typing.

Table 28. Individual Virtual crossmatch results for Serum #060 vs. Donor #V1 - cont.

Donor #V1 HLA A*11:01-A*26:01-B*18:01:01G-B*27:05:02G-C*06:08-C*07:01:01G/DRB1*03:02-DRB1*13:01-DRB3*01:01:02G-DRB3*02:02:01G-DQB1*04:02-DQB1*06:03-DPB1*01:01-DPB1*03:01

Center	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)	Virtual B-cell prediction	Class II DSA (MFI)	Risk Assessment	Comments
8001	60	100	Positive	B27 (4377) B18 (6291)	Positive	DR13 (8456) DR18 (18985) DR52 (17048) DPw3 (20736)	Unacceptable	C*06:08; C*07:01 are not included in LSAB panel; DRB3*02:02(MFI=17048); DRB3*01:01(MFI=14625)
8050	60	99	Positive	B27 (3911) B18 (6150)	Positive	DR13 (9419) DR18 (17714) DR52 (15590) DPw3 (19101)	Unacceptable	
8083	60	95	Positive	B18 (4755)	Positive	DR18 (16173) DR52 (14765) DPw3 (18112)	Unacceptable	
8096	60		Negative	None	Positive	DR13 (12174) DR18 (16453) DR52 (13486) DQ4 (10753) DPw1 (13620) DPw3 (8712) DQ6 (13416)	Unacceptable	
8103	60	49	Positive	B27 (1645) B18 (2087)	Positive	DR3 (5510) DR18 (5510) DR52 (4498) DPw3 (8466)	Unacceptable	

Table 29. Individual Virtual crossmatch results for Serum #060 vs. Donor #V2

Donor #V2 HLA A*30:02-A*74:01:01G-B*50:01-B*58:01-C*02:10-C*06:02:01G/DRB1*11:01-DRB1*12:01:01G-DRB3*02:02:01G-DQB1*03:01:01G-DQB1*06:11-DPB1*02:01-DPB1*18:01

Center	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)	Virtual B-cell prediction	Class II DSA (MFI)	Risk Assessment	Comments
23	60		Positive	B50 (6304) B58 (12167) Bw4 (7070)	Positive	DR11 (15678) DR52 (12180) DPw2 (15504) DP18 (16730)	Unacceptable	
54	60	99	Positive	B50 (4237) B58 (14017)	Positive	DR11 (20920) DR52 (18336) DPw2 (20452) DP18 (23846)	Unacceptable	
206	60	97	Positive	B50 (3023) B58 (13133)	Positive	DR11 (17948) DR52 (16801) DPw2 (18398) DP18 (19893)	Unacceptable	
230	60	94	Positive	B50 (3600) B58 (10840)	Positive	DR11 (16433) DR52 (13920) DPw2 (16624) DP18 (16540)	Unacceptable	
774	60	64	Positive	B50 (3090) B58 (11117)	Positive	DR11 (18592) DR52 (14520) DPw2 (18941) DP18 (21678)	Unacceptable	
792	60	100	Positive	B50 (3168) B58 (11136)	Positive	DR11 (17203) DR52 (15014) DQ7 (804) DPw2 (17410) DP18 (19605)	Unacceptable	No C*02:10 bead on SAB panel; No DQB1*06:11 bead on the SAB panel
836	60		Positive	B50 (3123) B58 (11770)	Positive	DR11 (17970) DR52 (17265) DPw2 (17695) DP18 (21178)	Unacceptable - likely flow positive	Positive cut off is 1000 MFI for DSA and result is combined for T and B cell crossmtach
1160	60	99	Positive	B50 (4002) B58 (10640)	Positive	DR11 (19761) DR52 (14530) DPw2 (19654) DP18 (22277)	Unacceptable	
1461	60		Positive	B50 (1545) B58 (2742)	Positive	DR11 (11236) DR52 (5091) DPw2 (10571) DP18 (10403)	Unacceptable	
2400	60	64	Positive	B50 (2546) B58 (10914)	Positive	DR11 (19784) DR52 (17087) DPw2 (19691) DP18 (21033)	Unacceptable	Strong Class I DSA; Class II DSAs C1q Positive ; DP not included in % PRA
3224	60	96	Positive	B50 (4025) B58 (14405)	Positive	DR11 (19321) DR52 (18227) DPw2 (18799) DP18 (22026)	Unacceptable	
3753	60	99.27	Positive	B50 (2227) B58 (11094)	Positive	DR11 (19836) DR52 (16250) DPw2 (20454) DP18 (21559)	Unacceptable	
3966	60	99	Positive	B50 (3914) B58 (12879)	Positive	DR11 (19077) DR52 (16632) DPw2 (19457) DP18 (19649)	Unacceptable	DSA B58 B50
4661	60	99	Positive	B50 (3914) B58 (2489)	Positive	DR11 (14365) DR52 (8758) DPw2 (14101) DP18 (13851)	Unacceptable	Ab against Epitope 131S; Ab against Epitope 13SE
5219	60		Positive	B21 (4048) B50 (1988) B58 (3779) Bw4 (6798) A2C (9727)	Positive	DR11 (67484) DR52 (36539) DPw2 (21222) DP18 (20728)	Unacceptable	
8001	60	100	Positive	B50 (3967) B58 (13649)	Positive	DR11 (19665) DR52 (17048) DQ7 (727) DPw2 (19742) DP18 (22736)	Unacceptable	C*02:10; DQB1*06:11 not in LSAB panel

Table 29. Individual Virtual crossmatch results for Serum #060 vs. Donor #V2 - cont.

Donor #V2 HLA A*30:02-A*74:01:01G-B*50:01-B*58:01-C*02:10-C*06:02:01G/DRB1*11:01-DRB1*12:01:01G-DRB3*02:02:01G-DQB1*03:01:01G-DQB1*06:11-DPB1*02:01-DPB1*18:01

Center	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)		Virtual B-cell prediction	Class II DSA (MFI)	Risk Assessment	Comments
8050	60	99	Positive	B50 (3768) B58 (13078)		Positive	DR11 (20456) DR52 (15590) DPw2 (20578) DP18 (21984)	Unacceptable	
8083	60	95	Positive	B58 (9577)		Positive	DR11 (17329) DR52 (14765) DPw2 (16918) DP18 (20170)	Unacceptable	
8096	60		Positive	B58 (6767)		Positive	DR11 (19701) DR12 (11315) DR52 (13486) DPw2 (12909) DQ6 (13416)	Unacceptable	B58 (6767)
8103	60	49	Positive	B50 (1438) B58 (2743)		Positive	DR5 (10903) DR11 (10903) DR52 (4498) DPw2 (10419) DP18 (9800)	Unacceptable	

Table 30. Individual Virtual crossmatch results for Serum #060 vs. Donor #V3

Donor #V3 HLA A*11:01-A*24:02-B*40:06-B*51:01-C*08:01:01G-C*14:02:01G/DRB1*09:01:02G-DRB4*01:01:01G-DQB1*03:03-DPB1*02:01-DPB1*05:01:01G

Center	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)		Virtual B-cell prediction	Class II DSA (MFI)	Risk Assessment	Comments
23	60		Positive	A24 (1658) B51 (6634) Bw4 (7070)		Positive	DPw2 (15504)	Unacceptable	
54	60	99	Positive	A24 (1701) B51 (5589)		Positive	DPw2 (20452)	Unacceptable	
206	60	97	Positive	B51 (4390)		Positive	DPw2 (18397)	Unacceptable	
230	60	94	Positive	B51 (3800) Bw4 (4000)		Positive	DPw2 (16787)	Unacceptable	
774	60	10	Positive	B51 (4230)		Positive	DPw2 (18941)	Unacceptable	
792	60	100	Positive	A24 (1361) B51 (4225)		Positive	DPw2 (17410)	Unacceptable	Repeat B51 mismatch from pregnancy
836	60		Positive	A24 (1763) B51 (4246)		Positive	DPw2 (17695)	Unacceptable - likely flow positive	Positive cut off is 1000 MFI for DSA and result is combined for T and B cell crossmtach
1160	60	99	Positive	A24 (1131) B51 (4831)		Positive	DPw2 (19654)	Unacceptable	
1461	60		Positive	B51 (1638)		Positive	DPw2 (10571)	Unacceptable	
2400	60	10	Negative	B51 (3749)		Positive	DPw2 (19691)	Unacceptable	Class I DSA is C1q Negative; Class II DSA is C1q Positive; DP not included in % PRA
3224	60	96	Positive	A24 (1934) B51 (5637)		Positive	DPw2 (18799)	Unacceptable	
3753	60	99.27	Negative	B51 (2813)		Positive	DPw2 (20454)	Unacceptable	paternal repeat mismatch; DP2 antibodies too strong.
3966	60	99	Positive	A24 (2079) B51 (4567)		Positive	DPw2 (19457)	Unacceptable	DSA A24 B51 DSA DP2
4661	60	99	Negative			Negative	DPw2 (14101)	Acceptable	Ab against Epitope 56E
5219	60		Positive	A24 (2215) A9 (3206) B51 (658) B5 (1310) Bw4 (6798) A2C (9727)		Positive	DPw2 (21222)	Unacceptable	
8001	60	100	Positive	A24 (1524) B51 (5435)		Positive	DPw2 (19742)	Unacceptable	
8050	60	99	Positive	B51 (4261)		Positive	DPw2 (20578)	Unacceptable	
8083	60	95	Positive	B51 (3891)		Positive	DPw2 (16918)	Unacceptable	
8096	60		Positive	B51 (7062)		Positive	DPw2 (12909)	Unacceptable	
8103	60	49	Positive	A24 (529) B51 (1396)		Positive	DPw2 (10419)	Unacceptable	

Table 31. Individual Virtual crossmatch results for Serum #060 vs. Donor #V4

Donor #V4 HLA A*02:06-A*11:04-B*35:05-B*46:01-C*01:02:01G-C*04:01:01G/DRB1*09:01:02G-DRB1*15:02-DRB4*01:01:01G-DRB5*01:02:01G-DQB1*03:03-DQB1*05:01-DPB1*03:01:01G-DPB1*13:01:01G

Center	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)		Virtual B-cell prediction	Class II DSA (MFI)	Risk Assessment	Comments
23	60		Positive	A2 (15436) B35 (6356) B46 (5966)		Positive	DPw3 (14153)	Unacceptable	
54	60	99	Positive	A2 (20361) B46 (3754)		Positive	DPw3 (21550)	Unacceptable	
206	60	97	Positive	A2 (18620) B35 (3354)		Positive	DPw3 (16756)	Unacceptable	
230	60	85	Positive	A2 (16249) B35 (3692) B46 (3285)		Positive	DPw3 (15000)	Unacceptable	
774	60	59	Positive	A2 (14963) B35 (3266) B46 (2854)		Positive	DPw3 (19288)	Unacceptable	
792	60	100	Positive	A2 (15811) B35 (3216) B46 (2770)		Positive	DPw3 (17856)	Unacceptable	No A*11:04 or B*35:05 bead on the SAB panel. Repeat A2 mismatch
836	60		Positive	A24 (1763) B51 (4246) Cw8 (2650)		Positive	DPw2 (17695)	Unacceptable - likely flow positive	Positive cut off is 1000 MFI for DSA and result is combined for T and B cell crossmtach
1160	60	99	Positive	A2 (15799) B35 (4091) B46 (2919)		Positive	DPw3 (19833)	Unacceptable	
1461	60		Positive	A2 (4631) B35 (1569) B46 (1154)		Positive	DPw3 (8785)	Unacceptable	
2400	60	59	Positive	A2 (17967) B35 (3321) B46 (2336)		Positive	DPw3 (18708)	Unacceptable	Class I DSA (A2) is C1q Positive; Class II DSA is C1q Positive; DP not included in % PRA
3224	60	96	Positive	A2 (19917) B35 (4348) B46 (3691)		Positive	DPw3 (20114)	Unacceptable	
3753	60	99.27	Positive	A2 (16373) B35 (2276) B46 (1934)		Positive	DPw3 (18134)	Unacceptable	
3966	60	99	Positive	A2 (18082) B35 (4020) B46 (2662)		Positive	DPw3 (18058)	Unacceptable	DSA A2 B35 B46
4661	60	99	Positive	A2 (5551) B35 (1497) B46 (752)		Positive	DPw3 (11406)	Unacceptable	Ab against Epitope 144TKH; 131S; Ab against Epitope 56E
5219	60		Positive	A2 (32135) B35 (3111) B46 (724) A2C (9727)		Positive	DPw3 (18383)	Unacceptable	
8001	60	100	Positive	A2 (19081) B46 (3462)		Positive	DPw3 (20736)	Unacceptable	A*11:04; B*35:05 is not included in the LSAB panel
8050	60	99	Positive	A2 (16439) B35 (3815) B46 (3405)		Positive	DPw3 (19101)	Unacceptable	
8083	60	95	Positive	A2 (15010)		Positive	DPw3 (18112)	Unacceptable	
8096	60		Positive	A2 (8587)		Positive	DR51 (9052) DPw3 (8712)	Unacceptable	
8103	60	49	Positive	B46 (1103)		Positive	DPw3 (8466)	Unacceptable	